



CHiME Opioid Task Force Playbook

Contents

Introduction	1
Creating an Opioid Stewardship Committee.....	4
Background.....	
Real World Examples.....	
Measuring Success.....	
Patient Considerations.....	
Key Takeaways and Links to Resources.....	
Building your Dashboard	20
Provider Education.....	28
Orderset Maintenance and Carepathways.....	42
ePCS	50
Incorporating PDMP into the Workflow	59
Patient Education	70
Community Outreach and Collaboration	78
CHiME Opioid Task Force – PDMP Strategy Survey Results	88



The CHIME Opioid Task Force was launched in early 2018 with a straight-forward mission: to turn the tide on the opioid epidemic using the knowledge and expertise of the nation’s healthcare IT leaders. While our mission is straight-forward, achieving it is a complicated challenge. Opioid addiction is a complex disease that requires long-term, if not lifetime, care from well-informed clinicians who are supported with easy-to-use and reliable tools. The CHIME Opioid Playbook has been created by CIOs and CMIOs for CIOs and CMIOs to help them develop a program that will help their providers, healthcare organizations and especially patients be successful.

The playbook provides a framework to build IT-based supports for launching and maintaining system-wide initiatives to reduce the disease of opioid addiction in our communities. It is based on the knowledge, experience and insights from the diverse membership of CHIME and CHIME Foundation partners, with real-world examples, best practices and links to valuable resources. The playbook is tailored to CIOs and CMIOs who serve as members of their organization’s Opioid Stewardship Committee, but we expect that others will find it to be a useful guide to understanding technology’s role in creating a solution.

This playbook is a living document. It is designed to offer up-to-date IT-based leading practices for addressing opioid addiction. For instance, portions of this iteration of the playbook focus on reducing prescriptions of opioids to patients being seen in the hospital setting. By exposing fewer patients to opioids, or lessening exposure for those who will benefit from treatment, is likely to lessen the number of people who inadvertently become addicted. Later iterations may focus on the population of people who had become addicted and now need long-term care to help them remain addiction-free.

Many of today's opioid success stories have a solid foundation of similar steps, which we compiled here. Each chapter is tailored to fit its specific purpose, but generally we describe the background for a specific component, provide real-world examples with keys to their success, offer guidelines for measuring success, key takeaways and links to resources. Yet every state, region and community are different and there is no one-size-fits-all solution. As you go through this process, we encourage you to identify the needs, strengths and opportunities within your own organizations and the communities you serve. You may find that certain steps work well for you while other steps need to be modified. You may discover an innovative solution that better fits your circumstances. We welcome hearing about your lessons learned and successes as you embark on this important work.

Thank you for joining us in our efforts to end the opioid crisis.

The CHIME Opioid Task Force

Chapter 1: Creating an Opioid Stewardship Committee

Background

Creating an Opioid Stewardship Committee is one of the critical first steps for hospitals and health systems seeking to play a more active and formal role in combatting the national opioid epidemic. This multidisciplinary internal committee serves as the underlying foundation to the hospital or health system's overall opioid stewardship effort, providing important structure, leadership and accountability.

"Within individual health systems, many efforts are led by multi-disciplinary safety committees composed of physician leadership, pharmacists, and other health system leaders. These teams identify problematic trends, assess evidence, and craft interventions that can be broadly implemented within different health settings. While there is no single method for designing a comprehensive health system approach to safe prescribing, examples of coordinated approaches often incorporate provider education, prescribing guidelines, risk-assessment tools, monitoring and coordination through electronic medical record (EMR) integration, and interventions to positively change provider or patient behavior."

- "Strategies for Promoting the Safe Use and Appropriate Prescribing of Prescription Opioids," Duke Margolis Center for Health Policy, February 2018

Although there is no shortage of recommendations and guidance about opioid stewardship programs in general – including [toolkits from the American Hospital Association](#) and others – far less has been published to date around considerations and strategies when establishing the internal opioid stewardship committee.

Part of the reason for this gap is likely due to the fact the structure of the committee (oversight, participants, responsibilities, subgroups, etc.) depends heavily on several factors that are unique to the hospital or health system:

- The overall goals of the opioid stewardship program
- The scope of the effort (i.e., broad vs. targeted)
- The specific needs of the community

Although published examples of best practices when creating an opioid stewardship committee are somewhat anecdotal – limited to a slide in a presentation or a few sentences in a report – one commonality is the multidisciplinary nature of the team. In addition to support and engagement from C-level executives, pharmacy leadership is almost always actively involved on the committee, as are representatives from departments that prescribe opioids (primary care, surgery, etc.) or that treat addiction. Participation from nursing leadership and behavioral health stakeholders is also common.

Given that technology and data are foundational to virtually *any* aspect of an opioid stewardship program – whether it is identifying at-risk patients or building dashboards to monitor opioid prescribing practices – it is critical that IT be engaged from the start. IT leadership should have a formal role on the hospital or health system’s opioid stewardship committee, and there should be active IT participation and representation in any relevant subgroups or “task forces” that report up to the stewardship committee. IT’s involvement on the committee will be essential to succeed with opioid stewardship efforts such as:

- Performing risk modeling to identify vulnerable patients
- Building dashboards and decision support tools to monitor opioid prescribing practices
- Providing standard and/or customized educational content to patients about opioid use
- Developing and implementing order sets and care plans
- Configuring alerts at the point of care to notify clinicians about potential opioid misuse
- Implementing electronic prescribing for controlled substances (EPCS)
- Integrating with the state’s prescription drug monitoring program (PDMP) database

Table 1. Leaders from many different departments or business units serve on opioid stewardship committees. The specific makeup of participants depends on the scope and goals of the opioid stewardship program.		
<ul style="list-style-type: none"> • Addiction medicine • Anesthesia • Behavioral health • Department of medicine • Emergency department • Hospital administration • IT/IS 	<ul style="list-style-type: none"> • Legal • Nursing • Nutrition • Pain management • Patient education / advocacy • Pediatrics • Pharmacy 	<ul style="list-style-type: none"> • Primary care • Process improvement • Psychiatry • PT/OT • Quality • Supply chain • Surgery

Real World Examples

Geisinger

Geisinger's efforts to reduce prescription opioid abuse began in 2015, when the opioid crisis started to become prevalent in Pennsylvania. Analytics played a significant role in helping drive the need to act.

A Geisinger committee of key physician leaders (representing 10 physician "councils" across the entire organization) decided to establish an Opioid Task Force to respond to the growing opioid epidemic in the region. The executive sponsor of the Opioid Task Force is Geisinger's chief pharmacy officer, and the team includes representation from physician leadership as well as IT (specifically the Epic Ambulatory Leader). The purpose of Geisinger's Opioid Task Force is to support the needs of the 10 physician councils, each of which is focused on a different aspect of Geisinger's Opioid Stewardship Program (e.g., pain management, clinical decision support tools, community outreach, etc.). The Opioid Task Force initially met on a weekly basis when Geisinger was planning and implementing the core components of its Opioid Stewardship Program; currently the team meets once a month.

IT involvement in Geisinger's Opioid Task Force was essential given the role that data plays in Geisinger's opioid stewardship efforts. In addition to being responsible for the reporting and analytics needed to support the opioid stewardship program (much of which is done using an external "big data" platform), IT also worked closely to collaborate with Geisinger stakeholders across the organization to link the provider dashboard to Geisinger's enterprise EHR, leverage information from the Pennsylvania state PDMP database, implement electronic prescribing for controlled substances (EPCS), and integrate data from Geisinger's pain app into the EHR and provider dashboard.

"Information technology is a powerful tool, but its effectiveness is limited without buy-in from clinicians and administrators...Technology is not the silver bullet to solving this problem; there is no single silver bullet."

- John Kravitz, Corporate CIO, Geisinger,

Source: [Healthcare Informatics](#), 4/27/18

[Geisinger's Opioid Stewardship initiative](#) has resulted in reducing the number of opioid prescriptions per month by half, from an average of 60,000 prescriptions per month down to 31,000 per month by April 2018. The downward trend has continued since then.

[Keys to Success:](#)

- **A passionate executive sponsor.**
- **Engagement from clinical and administrative leaders.**
- **Patience.** Kravitz notes: "Creating the right governance structure and implementing changes to curb opioid abuse takes a lot of diligence; it took us two full years to actually achieve results."
- **Focus on knowledge and analysis.** "We found that giving data back to our providers was critical to success; they absolutely respond to data and relative metrics," says Kravitz.
- **Create peer pressure among physicians.**
- **Employ change management methods** (skills, techniques, disciplines).

Geisinger's approach to opioid stewardship governance reflects the organization's holistic, multifaceted, and data-driven strategy for responding to the opioid crisis:

- Encourage effective, non-opioid therapies
- Leverage the Pennsylvania state PDMP
- Link provider dashboard to EHR
- Document findings in patient's medical record
- Integrate data from the Geisinger pain app into the dashboard and the patient's medical record
- Enable electronic prescribing for controlled substances (EPCS)

Source: "Geisinger's Approach to the Increasing Opioid Epidemic," CHIME Webinar, April 2018

Real World Examples

UChicago Medicine

At UChicago Medicine, opioid management falls under the scope of the organization's [pain care stewardship efforts](#). According to Samantha Ruokis (director, Quality Performance Improvement at UChicago Medicine), the decision to focus more broadly on pain care was very deliberate. "The message we want to send is that we are trying to provide the safest and most comprehensive pain care possible," says Ruokis. "Reducing opioid prescriptions is certainly a critical *part* of that, but we also want to make sure we don't lose sight of other important components of pain care that need to be included across the care continuum."

The multidisciplinary Pain Care Stewardship Committee at UChicago Medicine was established in the fall of 2016. The Pain Care Stewardship Committee reports directly to the Medical Center Quality Committee, the same group that has oversight over a number of other key quality initiatives at UChicago Medicine (such as the Readmissions Task Force).

The structure of UChicago Medicine's Pain Care Stewardship Committee is designed to be flexible and agile, with committee responsibilities and activities largely driven by the pain care stewardship *workplan*. Initiatives defined in the workplan dictate the work that needs to be done, and the committee implements the structure needed to ensure all related tasks are completed.

Table 2. Examples of past and present initiatives supported by UChicago Medicine's Pain Stewardship Committee

- Committee structure, governance and reporting development
- Data integrity and collection
- Pain screening questions
- Analgesic pathways
- Opioid misuse risk assessment
- Procedure targeted opioid interventions
- Non-opioid and non-pharmacological multimodal analgesia
- Prescriber clinical decision support and education
- Prescriber feedback and benchmarking
- Weaning protocols
- Naloxone co-prescribing

Participation on the Pain Care Stewardship Committee is intentionally broad to ensure that a variety of different perspectives on pain care are represented. Pharmacy was heavily involved from the start, as were pain experts across the organization. However, UChicago Medicine also engaged clinicians from many different disciplines outside of pain care, particularly those involved in interventions at the point of care (capturing data, receiving alerts, etc.) The goal was to achieve multidisciplinary participation and representation across all UChicago Medicine encounters and types of pain (acute, chronic and abuse disorders).

Multidisciplinary Participation on UChicago Medicine’s Pain Care Stewardship Committee¹		
<ul style="list-style-type: none"> • <i>Anesthesia/Pain</i> • <i>Child life</i> • <i>Health IT</i> • <i>Nursing</i> • <i>Surgery</i> 	<ul style="list-style-type: none"> • <i>Pain psychiatry</i> • <i>Pediatrics</i> • <i>Pharmacy</i> • <i>Primary Care</i> • <i>PT/OT</i> 	<ul style="list-style-type: none"> • <i>Subspecialists</i> • <i>Quality – Analytics and Process Improvement</i>

IT – along with the Clinical Informatics team at UChicago Medicine – also played a large role, with formal representation on the Pain Care Stewardship Committee and early involvement in planning the implementation of many of the interventions. According to Quality Improvement Project Manager Leslie Wiora, “Getting our technology and informatics folks engaged as early as possible was essential; a lot of our pain care initiatives and opioid-specific interventions heavily involved IT.” Adds Ruokis: “Collaboration between IT and the Pain Care Stewardship Committee was critical to ensure we had high fidelity data on pain and pain management from our EHR. It isn’t just about getting our clinicians the actionable data they need at the right time, it is also about ensuring that data is easy to understand and actionable across disciplines and across teams.”

Keys to Success:

- **Leadership support and buy-in** to make pain care stewardship an organizational priority – including support from IT, informatics and quality department leaders.
- **Engagement from clinicians at all levels in the organization.** “No matter how much leadership wants to make pain stewardship a priority, if you don’t have engagement from pain care experts in the organization and the clinicians involved at the point of care, you will struggle to be successful,” says Ruokis.
- **Formal IT and informatics representation on the Pain Care Stewardship Committee** – and early involvement from IT and informatics around planning and implementing opioid-specific interventions.
- **Not being content with the status quo.** According to Wiora, “We are constantly asking ourselves: *‘Where are we today? Where are the gaps we need to address?’* Continuing to move forward with innovative thoughts and ideas about pain care stewardship is critical.”

Real World Examples

CalvertHealth

At CalvertHealth (Prince Frederick, MD), opioid stewardship planning efforts first began in December 2015. An Opioid Stewardship Task Force was officially established in 2016, with a mission of ensuring safe and appropriate use of opioids. In terms of oversight, the Opioid Stewardship Task Force reports to the CalvertHealth Medication Usage and Safety Team (MUST), and meeting minutes are sent to CalvertHealth’s Medical Executive Committee.

CalvertHealth deliberately took a well-rounded, inclusive approach to membership on the Opioid Stewardship Task Force. The group is co-chaired by Kara Harrer (CalvertHealth director of pharmacy) and Drew Fuller, MD, (a CalvertHealth ED physician), with wide representation from across the CalvertHealth system, including stakeholders from hospital leadership, nursing, quality and public relations. (See below.) Notably, the Opioid Stewardship Task Force includes participants from outside CalvertHealth as well, such as representatives from the County Health Department and physician practices in the community. According to Harrer, “It was important to us that we collaborated with our allied health partners and educated them on what we were doing to tackle the crisis. We wanted to do our best to ensure everyone was on the same page and that opioid stewardship efforts in the community were as aligned as possible.”

Representatives on CalvertHealth’s Opioid Stewardship Task Force	
<ul style="list-style-type: none">• <i>ED Physician</i>• <i>Hospitalist Provider</i>• <i>Pharmacy</i>• <i>Social Work</i>• <i>Public Relations / Community Wellness</i>	<ul style="list-style-type: none">• <i>Quality / Patient Safety</i>• <i>ED / Urgent Care</i>• <i>Health Department</i>• <i>Patient advocate</i>• <i>Nursing</i>

The Task Force made data and reporting a high priority, including metrics such as total opioid orders in the emergency department per month, total opioid IV doses per month and total opioid tablets prescribed per month. “Focusing on data and reporting was essential for us to track progress on our initiatives, communicate the impact of our stewardship efforts to the board, and educate our physicians and allied health partners,” says Fuller.

IT worked actively with the Opioid Stewardship Task Force to build the reports and track the defined metrics in the EHR. Ensuring accurate data was critical, especially in terms of engaging and educating clinicians. “Physicians are very accustomed to being measured – they just want to be measured *fairly*,” says Fuller. “Access to the right data can be really powerful. Just being able to show a physician that they are prescribing two-three times more opioids compared to their peers is enough to change behavior.”

According to Phil Campbell, CIO/ vice president of information services at CalvertHealth, one of IT’s most important functions in supporting the Opioid Stewardship Task Force is to look for opportunities to make things more efficient. “The physicians know the diagnoses and treatments, the pharmacists know the drugs and the IT team knows the EHR application and what it is capable of,” says Campbell. “It is critical that the CIO stay plugged in with the needs and priorities of an Opioid Stewardship Committee. IT can often make things more efficient in ways end users may not even realize.”

[Keys to Success:](#)

- **Take a well-rounded, inclusive approach to forming an Opioid Stewardship Committee.** According to Harrer, “We wanted to ensure we involved all stakeholders in the discussion – including the public.”
- **Make an upfront investment in reporting.** Fuller advises: “Avoid vagueness. Define clear metrics that can accurately communicate information. Focus on measurable outcomes.”
- **Early – and ongoing – communication between the Opioid Stewardship Committee and IT.**
- **Adopt and endorse best practice prescribing standards.** “There is a myth that physicians don’t like guidelines, but we found that our doctors greatly appreciated them,” says Fuller.

Real World Examples

Gundersen Health System

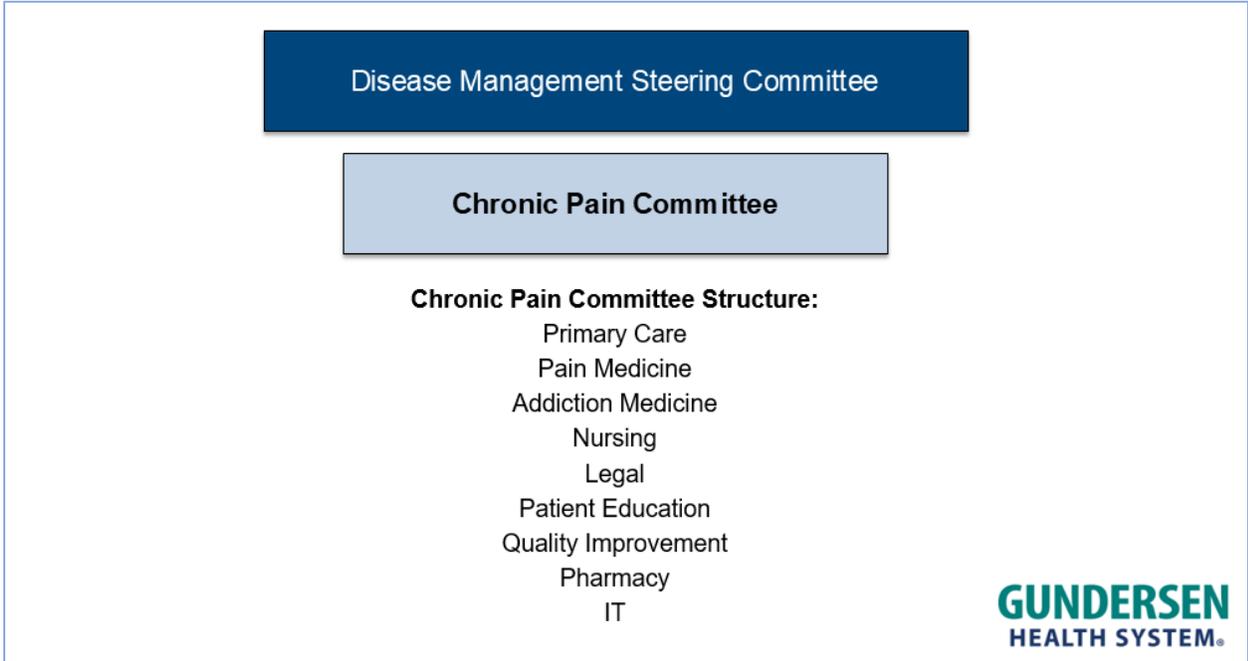
The rapid escalation of the national opioid epidemic has resulted in an increasing number of hospitals and health systems formalizing action plans in the last few years. However, some provider organizations have actually been tackling problems with opioid abuse and addiction for over a decade. One example is Gundersen Health System (GHS) in Wisconsin, which began its efforts back in 2008 amid concerns from ambulatory physicians about an increasing volume of opioid prescriptions and changes in patient behavior.

Gundersen Health System (which includes a 325-bed teaching hospital and 30 primary care clinics) employed a very targeted and ambulatory-focused strategy, centered on creating an organizational approach to pain management. According to Marilu Bintz, MD (senior vice president, Population Health and Strategy at GHS), "Growing concerns about patient behavior was one of the primary factors that caused us to take action in 2008, but we didn't have any way to actually identify the patients we needed to track and monitor. We decided the first thing we needed to do was build a registry of chronic pain patients where we could put the chronic pain agreements, DIRE (Diagnosis, Intractability, Risk and Efficacy) scores and urine toxicology screening results, as well as a template for medication refills."

A Chronic Pain Committee was established in 2009 to lead the effort. The makeup of the multidisciplinary team reflected the targeted, ambulatory-centric nature of GHS's approach. Committee members included GHS stakeholders from primary care, pain medicine, addiction medicine, nursing, legal, patient education, quality improvement and pharmacy. IT – which was responsible for building the registry of chronic pain patients and creating the electronic flow sheet and measures – also had formal representation on the Committee, particularly clinical data services staff.

The Chronic Pain Committee was put under the Disease Management Steering Committee at GHS. As Bintz notes, "Because we were building a registry of chronic pain patients, we treated it as a disease. Having the Chronic Pain Committee fall under our existing Disease Management Steering Committee was consistent with how we approach planning and implementation of other registries and internal disease management initiatives." Holly Boisen RN (system project manager at GHS) adds, "The Chronic Pain Committee was actually fairly autonomous, empowered to make important decisions independently and do what was necessary to keep the effort moving forward. When we needed help with something like organization-wide messaging or communication though, we could turn to the Disease Management Steering Committee for support."

Figure 1. Gundersen Health System’s Chronic Pain Committee



Keys to Success:

- **Begin with a defined, narrow focus.** GHS took a targeted approach that started with the development of a registry of chronic pain patients. The narrow, ambulatory-centric scope of that effort was reflected in the way the Chronic Pain Committee was structured (participants, oversight, etc.)
- **Strong clinician champions.** “This is a difficult topic, and you need someone who is willing to have those important conversations in a constructive, respectful manner,” says Bintz.
- **Accurate data.** According to Boisen, “Report validation, which required collaboration between IT and Quality, was critical. You really can’t put data out there if it isn’t accurate.”
- **A good CIO partner.** IT played an important role right from the start to build GHS’ chronic pain registry and create the electronic flow sheets and measures. As IT transitioned into more of a supporting role, both Boisen and Bintz point out the value of open, regular communication with IT stakeholders – and the importance of a good, collaborative partnership with the CIO.

Creating an Opioid Stewardship Committee at a Smaller Organization

Opioid stewardship committees are by no means exclusive to large academic medical centers and integrated health systems. Many smaller organizations – such as Healdsburg District Hospital, a critical access hospital in Healdsburg, Calif. – have also set up the internal structure and governance needed to support the specific scope of their respective opioid stewardship programs.

The Opioid Crisis and Pain Management Task Force at Healdsburg District Hospital (HDH) was established in July 2018 to “promote and standardize safe opioid use in pain management in the acute care setting and help combat the opioid crisis within surrounding communities.” The group – which meets every month – is chaired by the hospital’s pharmacy director, with the CNO serving as the executive sponsor. The CIO is a formal member of the task force, and there is participation from emergency physician group, district education coordinator and perioperative clinical leaders as well. The Opioid Crisis and Pain Management Task Force is responsible for a quarterly report that goes to the HDH Quality Committee and Pharmacy & Therapeutics/Medication Safety Committee, as well as a bi-annual report that goes to the hospital’s Medical Executive Committee.

Having the CIO actively involved on the Task Force right from the start was critical to HDH being able to quickly implement a number of key IT-related changes in support of their goal to reduce opioid prescriptions and standardize pain management. For example, in just the first few months alone, HDH has been able to successfully:

- Build – and modify – pain management standardized order sets in the EHR
- Identify current opioid prescribing patterns within the organization and establish a baseline to measure outcomes of the task force’s initiatives
- Implement a “pass through” in the EHR so physicians can directly access the California PDMP database at the point of care
- Implement and build a standardized Suboxone treatment protocol (in coordination with ED physician group) in EDIS (the EHR in the Emergency Department) to initiate treatment in opioid-withdrawal patients

Creating an Opioid Stewardship Committee at a Smaller Organization (continues)

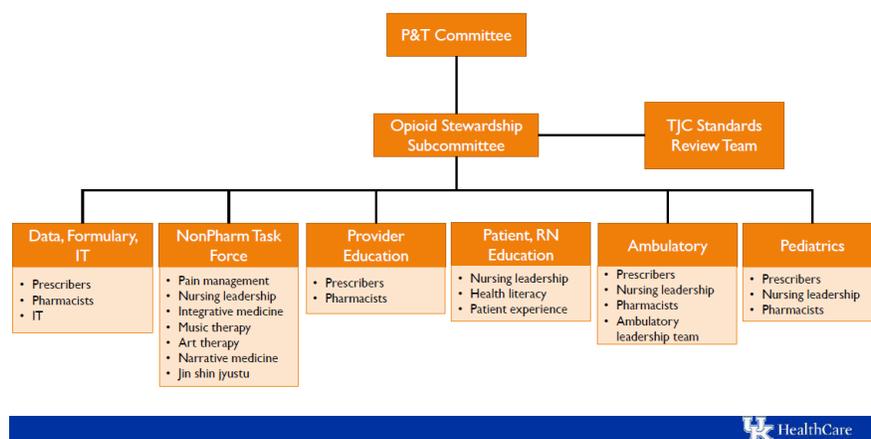
When asked his advice to CIOs at similar-sized hospitals establishing an opioid stewardship committee, HDH CIO Bill Cioffi says, “Build a coalition – both internally and in the community – and rely on appropriate resources. IT alone can only drive the effort so far. There must be strong leadership and engagement among physicians, nursing and pharmacy, since that is ultimately where the changes and interventions take place.”

One of the biggest challenges for small hospitals – especially compared to academic medical centers and integrated health systems – is the lack of resources. However, as Cioffi points out, smaller organizations also have some advantages that CIOs should keep in mind when establishing an opioid stewardship committee. “There is usually much less bureaucracy at smaller organizations,” says Cioffi. “Here at Healdsburg District Hospital, our leaders are very accustomed to wearing many different hats and taking on new kinds of responsibilities. Active, candid communication is just part of the culture. In many ways, we can implement meaningful change much more quickly than a large organization.”

Other Notable Examples

- Kaiser Permanente Southern California** took a “comprehensive” approach to combat the opioid epidemic, creating “prescribing and dispensing policies, monitoring and follow-up processes, and clinical coordination through electronic health record integration.” According to [a 2017 study in the Journal of Evaluation in Clinical Practice](#), “Kaiser Permanente Southern California's intervention was developed and overseen by a multi-disciplinary team composed of physician administrative leaders, primary care, pain management and addiction medicine physicians, pharmacists, information technology leaders, and education specialists... This structure provides the critical framework needed to develop, communicate, implement, and sustain the initiative.”² Results from implementing the interventions included “a 30% reduction in prescribing opioids at high doses” and “a 98% reduction in the number of prescriptions with quantities greater than 200 pills.”
- At **University of Kentucky HealthCare**, the opioid stewardship committee is modeled after the antimicrobial stewardship committees in many hospitals.³ [According to Phillip Chang, MD](#) (CMO at UK Kentucky HealthCare), the committee is responsible for “monitoring the prescribing patterns and educating physicians, nurses and pharmacists about the rules around prescribing.”

UK HealthCare’s Opioid Stewardship Committee



Measuring Success

Key Success Factors When Establishing an Opioid Stewardship Committee

Clear mission statement and goals

- Well-defined accountability structure
- C-Suite engagement and support
- Multidisciplinary participation on the committee, especially from pharmacy leadership and departments that prescribe opioids or treat opioid addiction
- Formal involvement of IT leadership on the opioid stewardship committee, as well as IT participation and engagement in any applicable opioid stewardship committee subgroups or task forces
- Protected time for leaders to participate on opioid stewardship committee-related tasks

Key Takeaways

- Creating an opioid stewardship committee that is positioned to succeed requires support and engagement from C-level leadership
- Multidisciplinary participation on the opioid stewardship committee is also key
- IT should play a significant role on the opioid stewardship committee – both at the leadership level as well as engagement in committee subgroups and task forces
- The specific structure of the opioid stewardship committee (stakeholders involved, subcommittee tasks, overall oversight, etc.) should reflect the unique goals and scope of the opioid stewardship program as well as the needs of the community

Resources

- [NQF “Playbook” on Opioid Stewardship \(March 2018\)](#)
- [“Strategies for Promoting the Safe Use and Appropriate Prescribing of Prescription Opioids,”](#) Duke Margolis Center for Health Policy, February 2018
- [“Stem the Tide: Addressing the Opioid Epidemic,”](#) American Hospital Association, 2017
- [“Safer and more appropriate opioid prescribing: a large healthcare system's comprehensive approach.”](#) Losby JL, Hyatt JD, Kanter MH, Baldwin G, Matsuoka D. J Eval Clin Pract. 2017;23:1173–1179.

Chapter 2: Creating Your Dashboard

Background

Chapter 1 focused on strategies for creating an Opioid Stewardship Committee, with examples from an academic medical center, large healthcare systems and a critical access hospital. Based on the experience of these organizations and many other health systems, it's safe to say that an Opioid Dashboard is one of the first deliverables that the Opioid Stewardship Committee will need. The dashboard will play a critical role as a tool to view and monitor performance metrics and present other relevant data. However, it is very important that the dashboard is delivered in partnership with the committee—not as a prerequisite to the creation of the committee. Many initiatives fail to launch while business intelligence teams toil at creating perfect dashboards without the input or buy-in of the initiative leaders.

This is not to say that the IT leader won't do some homework leading up to the initial meeting of the Opioid Stewardship Committee. Just as the medical directors should do literature review before heading into the meetings, the IT leaders should have a firm grasp on:

- What their vendors provide out of the box
- What their team has the ability to customize
- What technologies and metrics have been successful at other organizations

This chapter of the playbook will walk you through those considerations. But before you get started, you need a clear idea of your organizational goals for this initiative.

Setting a goal

Most of the organizations we surveyed had the following among their key goals.

Key Goal: Invest in the future health of our community by reducing the pipeline into addiction. This requires us to reduce the total Morphine Milligram Equivalents (MMEs) that are prescribed, especially for opioid naïve patients.

Whether your organization chooses this as one of its goals is up to the discretion of the committee. But let's use this as an example.

In this case, you haven't built a dashboard to try and dictate the goal. Instead, you've waited for your committee to set this goal first and offer further definitions of exactly what you should be measuring. In this example, we're not just measuring the total MME, but we also want the ability to drill down on a subset of patients who are not yet addicted. Now that you have this definition, you can begin working on the reports and dashboards that will track this metric in lockstep with the actual effort of the committee.

Start Building

At some point fairly early in the effort, you'll notice that you have a handful of working metric definitions that tie to the Stewardship Committee's goals. It's highly advisable to document these definitions so that users can easily understand what the dashboards are telling them. It also helps the credibility of the dashboard to know that the definitions were discussed and agreed among medical and operational leaders.

Now that you've got a working set of your first few metrics, it's time to start building! Keep these high-level goals in mind:

- Measure your baselines
- Track progress
- Break down the progress to functional areas
- Do a strong wave of data validation with your operational counterparts
- Create the framework for your clinical leaders to have conversations with their teams

Key Insight: The ultimate way a dashboard drives change is by enabling conversations. Create a dashboard that allows medical directors to have a conversation with physicians about normal prescribing practices, outlier situations, and standard protocols. Without these conversations, change can't happen.

A common practice among successful organizations we surveyed for this chapter was their dashboard was an ever-evolving work. New functionality was continuously added throughout the initiative. This meant when they first started, they were able to publish some initial data, make an operational change, publish new data, and continue the cycle until the dashboard and the initiative were mature. You may recognize this as a sort of "Agile development" method, where a small product is delivered initially and then improved until it becomes mature. This method appears to be common among dashboard builders who succeeded in their Opioid Reduction initiatives.

Governance

Just like most big initiatives, you will quickly encounter the situation where there are more good ideas than resources to build dashboards and technologies to support the ideas. That's OK! It just needs to be well managed, and your experience as an IT leader has already given you the solution to this problem: Governance.

The teams we surveyed commonly had a process in place that allowed them to prioritize the ideas generated in the Stewardship Committee and rank them by the estimated opportunity. They also were able to specify to the committee how many IT FTEs were available for the initiative. These two inputs allowed the technology and operational teams to have the same set of expectations as they worked through the queue of ideas in priority order.

Real World Examples

Anne Arundel Medical Center

Anne Arundel Medical Center was able to reduce their opioid prescribing by over 60% through a series of interventions that relied heavily on their dashboards.

The organization set up the public goal of achieving a 50% reduction in an 18-month period from the initial announcement. After that first and most broadly sweeping goal, their opioid task force set up the following goals:

- 50 percent reduction in MME prescribing - publicly announced
- Reduction in prescribing variation - internal only
- Maintain patient satisfaction with pain management - internal only

“You potentially could get bogged down in the mindset that I just can’t even get started until our dashboard is ready. ... That didn’t match our experience. We brought the task force together and started evolving the analytics as the needs of the task force solidified. ... That led to our initial dashboard.”

- Dave Lehr, CIO, Anne Arundel

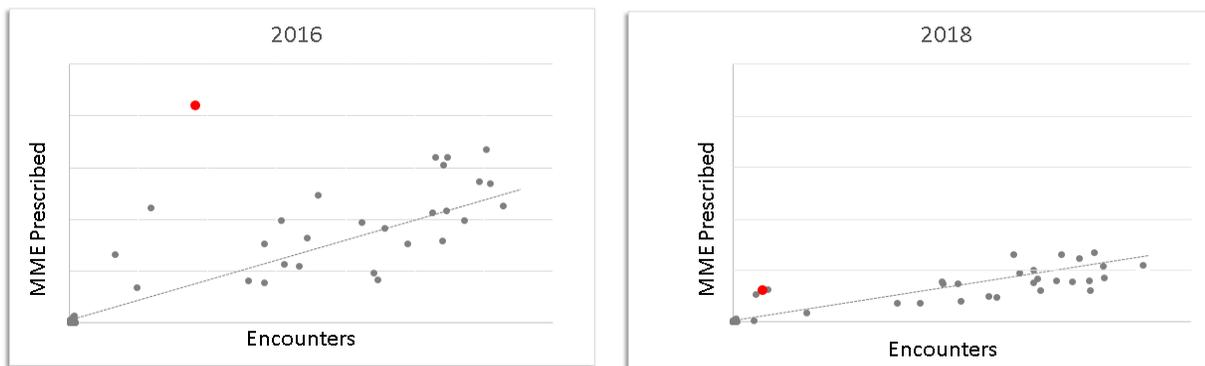
Source: [“A Journey to Opioid Prescribing Reduction,”](#) CHIME webinar, July 2018

Initially, this organization focused on the Emergency Department by creating a dashboard with just two simple metrics:

- Total MME’s prescribed – broken down by provider and for the whole department
- Total MME per encounter for each provider

Using these two simple metrics, the Opioid Task Force was able to prove their performance improvement methodology. In addition to the overall health system goal of a 50 percent reduction in prescribing, the ED set the sub-goal of reducing their variability between prescribers. Below you can see, visually, how this metric evolved over time.

MME Vs. Encounters by ED Physician



Here, both the slope of the line (Total MME) and the standard deviation from the line were reduced. And in showing the provider represented by the red dot above that he was a significant outlier from his peers, the provider quickly learned that his practices were not normal and adjusted. This visual management technique is what the dashboard is intended to facilitate: critical conversation supported by data.

This also highlights the importance of the Stewardship Committee's leadership of the effort. The data alone will not drive change. Only leaders within the committee can make that happen, using the data as a tool.

Over a short period of time (less than three months), the Anne Arundel opioid dashboard grew from those humble beginnings to a full enterprise-wide view of all opioid prescribing, as led by the committee. The top priority metrics that they included were as follows:

- Patient/Community Outcomes
 - Patient satisfaction with pain management in the ED
 - Chronic pain prescribing vs. prescribing for opioid naïve patients
 - Calls for second prescriptions to measure the effectiveness of EPCS
 - Pills prescribed but not used, reported by patient's patient portal and follow-up visits
 - Also captured the reason for taking (many took pills without experiencing pain)
 - County data on overdoses in the community
- Prescribing volume
 - Total MME, median MME per encounter, number of encounters with opioid prescriptions, number of patients with prescriptions
 - All broken down by service line, prescriber, department, patient geography, etc.

- Duration of use
 - Median pills/MME per patient, pills/MME per order
- Inter-departmental prescribing variability
- Outliers per procedure (which OB gives the most pills for a C-Section, for instance)
- Protocol compliance (percentage of procedures with a departmentally established pain protocol that deviate from the protocol)
- MME within 24 hours of discharge as a predictor of how much the patient needs after discharge.

It's also worth noting that in the process of setting up the dashboard, the Anne Arundel team began putting the framework in place to toggle the dashboard from opioids to benzodiazepines. This will begin driving new initiatives at their organization using the same framework.

The Anne Arundel team started their work earlier than many other organizations, so most of their dashboard tools were built custom in-house. Their team cautions, though, that since they did their work, a lot of out-of-the-box functionality has been released by their vendors. They believe that if they began the work today, they could accelerate their work with a simple call to their EMR support representatives who could help them configure pre-released tools.

[Keys to Success](#)

- **Develop the dashboard in partnership** with initiative leaders in the Opioid Steering Committee or Opioid Task Force to incorporate their perspectives and ensure buy-in
- **Set goals** and let them determine the design and functionality of the dashboard
- **Begin modestly with a few metrics** to prove the performance improvement methodology
- Ensure the dashboard provides **clear and unrefutably data** to support change management
- **Build off your successes** to include more metrics and initiatives
- Using **out-of-the-box solutions may prove to be faster** than building custom in-house tools

Real World Examples

Geisinger

Geisinger Health System is another example that paralleled the insights offered by Anne Arundel. Their system also began with the publicly stated goal of a 50 percent reduction in prescribing. They, similarly, achieved a reduction of over 65 percent as of the time of this publication.

Their journey had many similarities to the previous case study, but they added that there were some key factors they measured that weren't included in Anne Arundel's dashboard.

Some of those key metrics included:

- Patient education specific to pain control
- Alternatives to opioids such as NSAIDs, APAP, PT, yoga, etc.
- Patients prescribed both an opioid and a benzodiazepine
- Patients with a toxicity screen in the last year

"Although the dashboard may be unique to Geisinger, we believe other health systems and hospitals can generate similar reports on opioid prescribing through their electronic health records or clinical order entry systems. The initiatives rolled out by Geisinger are broadly applicable to healthcare systems across the United States, and we encourage others to apply these strategies in their organizations."

John Kravitz, Corporate CIO, Geisinger, in testimony to the Health Subcommittee of the U.S. House Energy and Commerce Committee, April 12, 2018

Other Notable Examples

All of the organizations interviewed had very similar processes that led to their organizational opioid dashboards. In addition to that process, though, here are some additional metrics in the menu that your Opioid Committee may want to consider:

- Jefferson Health
 - Number of prescriptions with high quantities of MME
 - Number of prescriptions with long durations
 - Number of patients with more than two opioid prescriptions in 30 days
- Metro Health
 - Deaths avoided with naloxone
- Johns Hopkins
 - Patients who are co-prescribed naloxone

Measuring Success

Grading the success of a dashboard can be tricky. In many cases, the operational leaders may grade the success of a dashboard by their inability to ask questions that can't be answered with the data. However, we encourage you to avoid the trap of equating these two things.

Key Insight: "I can think of more things to measure" \neq "our dashboards aren't successful."

Instead, we encourage you to ask the initiative leaders within your committee to evaluate your success on the following dimensions:

- Are there things we initially identified as part of our goals yet we're unable to tell if we moved in the right or wrong direction?
- Is the data quality sufficient for me to discuss next steps with members of my team?
 - If no, then who in my department can work with the analyst to close data integrity gaps?

If you communicate this framework for measuring the success of your dashboard early in the discussions with your committee, you'll be setting the right expectation with that group. There will always be more questions, but the work doesn't have to wait to begin.

Patient Considerations

One consideration with measuring all these things and successfully getting buy-in across your whole medical community is that some people may feel a loss of autonomy and potentially that they are being unnecessarily surveilled. In some cases, prescribers in the health systems that we interviewed even went so far as to tell the patients that they couldn't prescribe pain medications because "they are watching everything we do."

These cases are the exception rather than the rule, however. Most prescribers welcomed having a standard prescribing protocol that their peers agreed with that they could refer to. But to get out in front of any unproductive dialog with patients, many of the health systems we interviewed coupled this work with strong patient and community outreach and messaging. This will be addressed in a subsequent chapter of this playbook.

Key Takeaways

- Don't allow the dashboard to become a prerequisite to the formation of your Opioid Stewardship Committee
- First, lead the Stewardship Committee in the creation of simple, measurable goals
- Start small and build basic functionality to facilitate the measurement of those goals
- Validate the data with your operational stakeholders. No report goes live without data validation from the clinical departments
- Iterate and evolve your dashboards over time. Your understanding will evolve and so should your tools

Resources

In addition, here are some links to resources from our community that may be helpful along your journey.

["Assessment of Opioid prescribing practices before and after implementation of a health system intervention to reduce opioid overprescribing."](#) Meisenberg BR, Grover J, Campbell, C. JAMA Netw Open. 2018; 915): e182908

["How Geisinger Health System reduced opioid prescriptions,"](#) Harvard Business Review, Nov. 19, 2018

Chapter 3: Provider/Patient Education and Change Management

Background

The opioid crisis arose in the U.S. due to aggressive pharmaceutical marketing without fully warning of their addictive qualities, a clinical focus on alleviating pain allowing pain to be elevated to the fifth vital sign and lack of regulatory constraints to prescribing. In recent years, many hospitals and health systems have recognized that physician prescribing practices have unintentionally contributed to what is now an opioid epidemic and now are taking steps to reduce prescribing of opioids and thus shut down a pipeline to potential addiction. In the meantime, physicians may feel torn between an increased awareness of the risks of addiction and their desire to reduce patients' pain and suffering.

The Centers for Medicare and Medicaid Services has stated "primary care providers account for nearly half of all dispensed opioid prescriptions and their prescribing rates have increased at high rates compared to other specialties." For every 1 million Americans, almost 50,000 doses of opioids are taken every day. [That's four times the rate in the UK.](#)

The previous chapters outlined how to create an Opioid Stewardship Committee and a robust dashboard to assess and monitor performance metrics tied to opioid prescribing practices. Healthcare systems described in Chapters 1 and 2 used their dashboards to establish baseline data, identify outliers and monitor change over time. As their success grew, they evolved their dashboards to conduct increasingly sophisticated and impactful analyses. But to reach those steps, they needed to modify physician prescribing patterns and temper patient expectations.

In this chapter, we provide strategies and resources for healthcare organizations to change physician behavior. We also offer a synthesis of the literature and lessons that an Opioid Steering Committee, Opioid Task Force and others can apply to educate and engage physicians and patients.

Framework of Proposed Solutions

By establishing an Opioid Stewardship Committee and developing a dashboard, you built the foundation to achieve the next steps of creating opioid provider and patient educational programs and ensuring adoption of best practices. The discussion points in the previous chapters touched on the outcomes that result when data and dashboards are used effectively to ignite change.

That alone may not suffice. The method to ensure permanent physician behavior change requires proven techniques based on influence and a bottom-up approach. In addition, a health system must provision for additional educational resources, content and content delivery methods for physicians who prescribe opioids to their patients and for patients wishing to understand and manage their treatment plans.

To bring a program forward, your organization will need to focus on:

- engagement with physicians and patients
- education
- behavior changes

Provider Education and Engagement

Real behavior change can happen only when physicians truly understand their prescribing tendencies. This requires awareness of prescribing habits that is informed by trustworthy data clearly presented in the dashboard. This is the first step to performance assessment and eventually to performance improvement. Some physicians may be convinced when a physician leader puts the data in front of them. Others may resist, insisting their professional experience validates their prescribing practices. One way to disprove their misconceptions (see Table 1) is to counter the assertions made with verifiable information backed up by factual data.

Table 1: The Common Myths	Debunk
Opioids lead to better long-term pain relief than alternatives	A 2018 JAMA article found no evidence that opioids were better than non-opioid meds for treatment of chronic back, hip or knee pain
Patients can only intentionally misuse prescribed opioids	A patient’s risk of misusing increases just three days after treatment initiation
The patient receiving the prescription is the only individual likely to use it	53% of individuals taking illegal opioids acquired them through a relative/friend (National Survey on Drug Use and Health: 2017)
We handle prescription opioids like other countries	Opioid use in us dwarfs every other nation by a very large factor (International Narcotics Control Board)

A physician-written [article in the Harvard Business Review](#) stated that “physicians are mesmerized by data and cannot look away.” It cited a strategy by Brent James, MD, executive director at the Institute for Health Care Delivery at Intermountain Healthcare: “Rather than make a frontal attack on physicians’ autonomy, he wears down their resistance to change by showing them how their practice varies from the norm.”

Arming providers with data and appropriateness measures can help them determine whether their prescribing behavior for opioids is consistent with peer-developed guidelines. Making prescribing data available to physicians allows them to self-correct without bringing their clinical judgment into question.

Proven steps used to self-assess prescribing behaviors and how they may align with norms are:

- Assess clinician perception by getting data on the current state through surveys or interviews about how opioids are used across the system, whether they are overused, underused and used appropriately
- Determine the opinions on the effectiveness of opioids relative to other pain management options and the safety of opioid prescription
- Ensure that the data presented to physicians is uniform and reliable so that organizational leaders can push for standardization of best practices
- Have the Opioid Stewardship Committee identify pain management studies from the literature and present the findings to the relevant service lines
- Develop reports and dashboards that analyze prescribing data that can be used by medical directors to share with clinicians to identify improvement opportunities by service line

Real World Examples

Anne Arundel Medical Center

Anne Arundel Medical Center in Maryland made [physician education a key component](#) in its effort to reduce opioid prescribing. Their strategy included:

- departmental grand rounds
- service meetings with data review
- circulation of medical journal articles with information on overprescribing

Their dashboard displayed of individual clinician prescribing compared with peers, which created a foundation for medical directors to have one-on-one discussions with prescribers to reinforce the key points of the education and review individual prescribing data and comparison with peers. The data points initially were blinded, which created a nonthreatening environment in which clinicians could strive to change. At the same time, the benchmarking and tracking data fed into some physicians' competitive spirit, prompting them to make deliberate changes in their prescribing behavior to improve their ranking.

To address physicians' concern about patient satisfaction, Anne Arundel Medical Center presented internal and published data showing no diminishment in patient satisfaction with lower opioid prescribing. Physicians who embraced lower prescribing strategies early on shared anecdotes of grateful patients who appreciated discussions about nonopioid alternatives, which eased other clinicians' concerns.

"Opioid overprescribing is falling in multiple areas of our health system, with no decline in patient satisfaction with pain management, or return visits to the Emergency Department due to under treatment. This success is based on concerted efforts of hundreds of physicians who altered their customary mode of practice over hundreds of thousands of patient visits, surgeries and hospital discharges."

--Barry Meisenberg, MD, lead on Anne Arundel Medical Center's Opioid Taskforce

Source: [Living Healthier Together](#), a publication of the Anne Arundel Medical Center

Keys to Success

- Begin by making sure **all stakeholders are educated** about the program and its goals.
- Review data periodically to **discuss progress and opportunities for improvement**. Hold one-on-one discussions between a medical director and physician to review the physician's performance compared to peers.
- Using blinded data at first creates a **nonthreatening environment**.

Real World Examples

Community Health Center Inc.

Community Health Center Inc. is a multisite federally qualified health center in Connecticut that provide primary care services for more than 140,000 medically underserved patients. The health center has a fully integrated HER for medical, dental and behavioral healthcare. They recognized that their patient population was impacted by chronic pain and that their primary care providers had limited resources and faced time constraints for dealing with patients receiving chronic opioid therapy. To help clinicians adhere to practice guidelines, they developed a dashboard to support opioid management based on current practice guidelines. The guidelines required patients receiving chronic opioid therapy have:

- an opioid treatment agreement
- routine urine drug screening
- routine reassessments of pain and functional status
- recommended co-management with a behavioral health provider

Providers were required to review Community Health Center's opioid management policy at employment annual review of this policy. Providers had access to a dashboard that displayed their rate of guideline adherence as well as other statistics and the ability to drill down by patient. Each week physicians and their teams received a Missed Opportunity Report listing patients who in the week prior had not received one of the guideline recommendations.

Based on [study data](#) collected before and after implementation of the dashboard, Community Health Center observed increased use in each of the recommendations. They also noted a decline in the percentage of patients prescribed opioids over the one-year period. They attributed the program's success to several possible factors, including:

- Clear and actionable data presented in the dashboard
- Team review of the data, which motivated support staff and physicians to adhere to the guidelines
- Continual performance feedback, which may have sparked competitive desire to improve

Keys to Success:

- Making the opioid management guideline transparent and available online for providers to easily access it.
- Designing a dashboard with clearly presented data.
- Giving providers the ability to use dashboards to identify gaps in patients' and plan care.
- Use of Missed Opportunities Report.
- Using the dashboard as a collaborative tool for support staff and physicians to foster a team approach to patient care.

Recommendations

It is recommended that the Opioid Stewardship Committee, staffed with physician leaders, develop an educational program that:

- Engages all physicians no matter what their prescription patterns are; the educational program should be developed to create change using face-to-face, one-on-one conversation
- Includes examples or patient stories to highlight the historical pain management culture that you are trying to change
- Engages naysayers and those who resist with additional personal training, providing them time to talk in person
- Includes analytics to drive discussions on standards, guidelines and reduce variability; reports should include benchmarking data about prescribing practice compared to physician peers
- Incorporates training into annual compliance/training program for all staff to ensure awareness
- Includes not just physicians but all clinical workforce; the educational program should include the organization's vision and commitment to ending the opioid crisis
- Makes it local and personal; engage frontline staff about the opioid epidemic and how your health system can play a role in reversing it
- Takes a wide approach to education, offering training through online training modules, system-wide forums, peer-to-peer discussions, educational podcasts and lunch and learns
- Understands and addresses barriers by administering a "culture assessment" survey to attending physicians, residents and fellows, pharmacists and pharmacy residents, and advanced practice providers to identify issues, barriers and where prescribers need support the most
- Adds awareness and alerts into the EHR so standards are integrated into the physician's workflow
- Launches an opioid awareness campaign focused on providers to boost engagement and awareness; campaign should partner with marketing to include newsletters, intranet communication, email blasts and community partners
- Provides CMEs and is disseminated at medical staff meetings, executive medical meetings, grand rounds,

How to Achieve Permanent Behavior Change

Education often is not enough. Real changes require permanent behavior modification, especially in physician practices where concepts and practices have remained in place for years and have become habitual. Even now with the opioid crisis fully recognized, physicians may lack awareness and familiarity with the most recent guidelines or may lack confidence to execute change. Many practicing physicians were trained in an era with set clinical methods in place with an emphasis on adequate treatment of pain and have valid concerns about harming patients by failing to prescribe sufficient analgesics.

“Educating physicians is less likely to alter their practice if it contradicts patients' preferences. Physicians may indeed oppose any mechanism that they perceive as threatening their sense of competence or autonomy, but such threats may be overcome if the patient is the agent of change.” James L. Wofford, M.D., M.S. Wake Forest University, Winston-Salem, NC 27157-1051

“Doctors have historically seen themselves as their patients’ sole advocates, with the rest of the world divided into those who are helping and those who are in the way. Resistance in the pursuit of patients’ interests was acceptable behavior. ”

Source: [“Turning Doctors into Leaders,”](#) Harvard Business Review

To effectively change prescribing behavior, physicians must believe that the action is good for their patients, is based on best practices and can be incorporated into their practice without significant barriers. The Theory of Planned Behavior is a good model for understanding physician clinical behaviors. (See Resources for more on the Theory of Planned Behavior.)

This theory recommends using a bottom-up approach that engages physicians. The approach emphasized influence rather than authority by not threatening the physician clinical and personal autonomy. Unlike a top-down approach that needs groups of physicians to reach a consensus on new approaches to care, the bottom-up approach involves leaders using their influence to construct a vision and build a case for change that doctors can buy into. It is a more inspirational method requiring participation of the Opioid Stewardship Committee rather than imposed by administration and senior leaders. This approach coupled with data analysis brings positive behaviors that enable the outliers to achieve success. Healthy competition method stimulates physicians to work toward goals and avoids the frustration of asking physicians to reach consensus. Research demonstrates that most physicians undergo stages of change in adopting new behaviors. (See Table 2)

Table 2: Stages of Change

1. Present facts, data and knowledge. Physicians require information about new data or new practice guidelines that advocate a change in practice behavior. Studies has also shown that information by itself is not enough.

2. Recognize that most physicians entered the profession because they want to do good. Appeal to their altruistic nature.

3. Once physicians know about and accept the behavior, they must have the ability to implement it. Enthusiasm by itself is insufficient if there is a lack of time, resources, staff, training or equipment.

Constraints imposed by office or clinic operations, practice leadership, information systems, regulations and insurance coverage can impede change.

4. Finally, like all people, physicians need reinforcement to maintain behaviors. It is human nature to forget, overlook or lose interest over time. The most committed physician needs reminder systems to remember when to implement guidelines, tracking systems to identify patients who need follow-up, and encouragement from practice leaders, systems of care and patients that their efforts are appreciated.

Guidelines and Prescribing Standards

Many professional and governmental organizations have published guidelines that reflect the most up-to-date research on pain management with best practices for opioid prescribing. The list in the Resources section provides material that assists providers through the various phases of pain management, suggests alternative therapies and recommends appropriate types and levels of medication when needed. Adoption of nationally recognized standards of care will enable clinicians to align their prescribing patterns with industry-wide best practices.

Patient Education and Engagement

There are many resources available, including the American Society of Addiction Medicine and the American Academy of Addiction Psychiatry, CDC Opioid Guidelines and toolkits from the American Hospital Association to assist with content development for an educational program. In addition, educational material and programming should equip physicians to engage patients who may be in different phases of addiction. Though most patients likely will never go past phase 1 and 2, there remain too many who are at risk as they progress to addiction and possibly death.

Phases of Addiction

- Phase 1: No opioid use, "opioid-naïve"
- Phase 2: Acute pain treatment with opioids
- Phase 3: Tolerance
- Phase 4: Dependence
- Phase 5: Recovery

Education should not only include treatments plans and guidelines but should include scripts and advice on how to have crucial conversations with patients about their expectations for pain, options for management and need for weaning off opioids. Pain management training consists of many topics as seen in Table 3.

Table 3. Topics for Pain Management Training

<ul style="list-style-type: none">• Safely tapering or discontinuing opioids when risks outweigh benefits• Designing a pain management treatment plan• Counseling patients about opioid safety, risks, and benefits• Safely prescribing opioids in various settings• Managing acute pain	<ul style="list-style-type: none">• Monitoring patients taking opioids• Making decisions about continuing or discontinuing opioids• Assessing risk of opioid misuse• Promote safe storage and disposal of opioids• Responding to signs of addiction	<ul style="list-style-type: none">• Ensuring compliance with controlled substances laws and regulations• Keeping accurate records and checking relevant databases PDMP• Opioid stages/awareness• Pain management alternatives• Community awareness and resources
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In addition, providers should be trained to avoid the stigma of substance disorder that could discourage patients from seeking appropriate treatment.

Patient Education with Joint Decision Making and Treatment Agreements

Prescribers should engage patients in a conversation about their expectation for pain and options for management. This requires patient education. Education should include considerations that address biopsychosocial factors with pain care:

- Defining and understanding contributing factors associated with pain
- Education on types of pain and factors that can influence or impact pain
- Differentiation of pain management strategies for acute and persistent or chronic pain
- Education on treatment options including non-pharmacological alternative methods for reducing and managing pain

It is important for care team members to direct patients to credible sources of health information, as an uninformed patient can be easily misdirected by divergent and sometimes false information available from noncredible sources. See the Resources section for a list of credible sources.

Shared decision making and use of treatment agreements will assist providers to review realistic benefits, risks and side effects (both common and serious), as well as alternative treatment options with the patient (See Table 4). Health system and hospitals must fully support providers in helping connect patients to resources, appropriate treatment, social support and the help they need.

Table 4: Patient engagement and shared decision making requires:

- Providing specific and realistic benefits of opioid medications including what they are and their intended use
- Offering alternative treatment options
- Assisting patients to focus on managing acute pain during healing and improve functionality
- Discussing benefits, risks, and side effects opioid use, and providing clear and easy to understand educational material
- Discussion safe storage of opioid medications including out of reach of others
- Encouraging questions and providing follow-up opportunities

Measuring Success

The outcome of physician education and change management for opioid management would be that healthcare providers would have substantial knowledge of the current best practices for pain management. They would begin a therapy regimen by first establishing treatment goals with all patients, including realistic goals for pain and function. Providers would prescribe non-opioids and non-pharmacologic alternative and adjuvant treatments as first line therapies and conduct regular reviews with patients of the effectiveness of the treatment plans. If opioid therapy is later identified as a need, providers would discuss the known risks and potential benefits of opioid therapy with their patients. The provider and patient would also consider how opioid therapy will be tapered and discontinued if its benefits do not continue to outweigh risks. Providers would begin by prescribing the lowest effective dosage of an immediate-release opioid and would avoid any extended-release formulations. Providers would conduct regular and regimented reviews of the effectiveness of the dose regimen and would monitor for adverse effects.

Key Takeaways

- Initiatives to improve opioid prescribing patterns must engage all providers. Expand access and awareness of non-opioid, opioid-sparing and non-pharmacological approaches.
- Do not develop a one-size-fits-all approach. Instead, a tailored approach based on patient type or archetypes and local needs should be utilized. This approach needs to consider differences in the types of patients being treated.
- Educate and engage physicians to use data to determine risk factors for abuse before prescribing and determine most effective care pathways and interventions to mitigate risk.
- Engage physicians to use patient specific risk profile.
- Educate physicians on opioid use disorders.
- Determine what treatment programs are available and appropriate for each archetype. Effectively categorize patients stratified by risk and match them to the most effective treatment protocol.
- Educate providers on how to use their EHR, including using electronic prescribing for controlled substances, and equip providers with more information about the patients to whom they are prescribing pain medications.
- Use advanced analytics to define common patterns in your community and design local responses and engage local physicians. Demonstrate to providers their prescribing rate relative to their peers and how their pain management practices apply to specific episodes of care.
- Engage provider associations and state health agencies to develop and clarify guidelines and best practices.
- Explore local and community ways to educate providers and patients on appropriate disposal practices and prevent misuse.

Resources

- [Healthcare professionals intentions and behaviours: A systematic review of studies based on social cognitive theories. Godin, G, Bélanger-Gravel, A, Eccles, M, Grimshaw, J. *Implement Sci.* 2008; 3.](#)

The following industry-recognized and public organizations have helped to establish industry accepted guidelines and prescribing standards:

- **Centers for Disease Control and Prevention (CDC)** developed and published the [CDC Guideline for Prescribing Opioids for Chronic Pain](#) to provide recommendations for the prescribing of opioid pain medication for patients in primary care settings. Recommendations focus on:
 - The use of opioids in treating chronic pain
 - Treatment options (not including cancer, palliative care, and end-of-life care)
 - Guidelines on when to initiate or continue opioids for chronic pain
 - Opioid selection, dosage, duration, follow-up and discontinuation
 - Assessing risk and addressing adverse impact of opioid use
- **SAMHSA, TIP 63 MEDICATIONS FOR OPIOID USE DISORDER**
 - Medications for Opioid Use Disorder treatment
 - Addressing Opioid Use Disorder in general medical settings
 - Pharmacotherapy for Opioid Use Disorder
- **AMA, Stem the Tide Addressing the Opioid Epidemic**
 - Clinician education on prescribing practices
 - Non-opioid pain management
 - Addressing stigma
 - Patient, family and caregiver education
 - Safeguarding against diversion
 - Collaborating with communities

Resources

Listed here are examples of credible sources of reliable patient educational content:

- [National Center of Biotechnology Information](#)
- [Turning the Tide: For Patients](#) – a website with education material for patients by former U.S. Surgeon General Vivek Murthy, MD
- The [U.S. Food and Drug Administration](#) website provides [information on opioids](#), a consumer's [Guide to Safe Use of Pain Medication](#), as well as a [List of Questions](#) patients should ask their provider. [Safe disposal instructions](#) can also be found on the website
- [Lock Your Meds Campaign](#) is an opioid safety campaign including educational focus on adult awareness prescription medications storage and safety.
- [What Patients Should Ask Prescribers Before Taking Opioids](#) is a good educational tool for Patients.
- The [FDA](#) has guidance on [Disposal of Unused Medications](#) including [DEA-Authorized Take Back Programs](#), and how to dispose of medication.

Chapter 4: Order Set Maintenance and Care Pathways

Introduction/Background: Order Set Maintenance

"If an option is designated as the 'default,' it will attract a large market share. Default options thus act as powerful nudges."

--Richard Thaler, Nobel Laureate, Economics

The power of the "default option" is such an influential factor in decision making that Richard Thaler was awarded the Nobel Prize for Economics in recognition of his studies of the phenomenon. Every day, in thousands of health systems around the world, doctors are presented with palettes of default options for what to prescribe, who to refer a patient to, and various other decisions. We call these pre-established defaults "Order Sets." And as Richard Thaler's work points out, they play an influential role in the adoption of best practices.

Of all the interventions taken on at organizations with a successful opioid stewardship program, order set maintenance is probably the most common and the most powerful. That is because the options presented on these powerful decision-enabling tools carry the tremendously important responsibility of matching our medical best practices. However, as our understanding of the opioid crisis progressed, our best practices changed rapidly, and often the order set defaults did not keep pace.

During the early phases of a successful opioid stewardship program, the committee should start to establish what the best medical practices should be in various clinical scenarios. One way to go about this is to look at the commonly used order sets and re-evaluate whether they match the way that the medical leaders of those service lines hope to standardize care. This is the beginning step of a thorough order set review process.

Key Recommendation: Technology Leaders in the Opioid Stewardship Committee need to offer order set review as a key subproject of the overall team's mission.

Real World Example

Anne Arundel Medical Center

At Anne Arundel Medical Center, one of the earliest initiatives of the opioid stewardship committee was for each medical director to review their opiate prescribing patterns and update or establish best practices for their service lines to standardize upon. The committee realized that it was going to be impossible to hold prescribers to any standard if it wasn't clear what the best practices were. As each medical director reviewed this in their area, a common theme arose that while medical opinions were changing about the best prescribing patterns, the EMR defaults weren't evolving to match the newly forming schools of thought.

This launched a major system-wide order set review process. It was done through a combination of user feedback and data review. Each medical director sent feedback directly to the CMIO on any commonly used order sets that had default prescriptions that exceeded the standard they wanted to establish. In addition to this, IT compiled a report of all commonly used order sets and their default opioid prescriptions for each medical director to review.

This two-way process allowed the team to quickly change the defaults that were being presented to users across the entire health system. Over the course of just a few short months, prescribing patterns quickly evolved in response.

But not all defaults are encoded inside of order sets. Data analysis showed that defaults are also encoded in human habits that are taught in medical training or passed generationally from doctor to doctor. The clearest example of this that AAMC saw was in the prescribing patterns for patients after a C-section. Many of these clinicians were averaging exactly 30 pills per prescription – not 29, not 31, but exactly 30, month after month. It was clear from the data that this couldn't arise solely from the needs of each individual patient but was most likely a result of habit and training.

As a result, the service line's medical director started a mantra: "20 is the new 30." This slogan meant that it's OK that humans are sometimes creatures of habit. But those habits should be based on best practice, and 20 was the new "correct" habit. Similar to other interventions, this visual management technique based on the data aided the medical director in leading his team to a rapid change in ordering patterns.

Real World Example

Methodist Hospital

The multidisciplinary Pain Management Committee at Methodist Hospitals (Northwest Indiana) includes representatives from pharmacy, nursing education, quality, IT and clinical informatics.

Methodist Hospitals rarely puts any opioids on a post-op order set. In most cases, physicians must go *outside* the order set if they want to prescribe a narcotic. According to Rhonda Planck, RN, BSN, CNRN, "We've left controlled substances on a few order sets because the physicians really pushed for it. However, when it comes to opioids, they cannot order a refill and can only write the prescription for a maximum of seven days. We are really trying to get away from making opioids a default option. Every patient's pain level is different, and it is important to be able to take that into consideration."

Methodist Hospitals runs their order sets through a third-party vendor to keep up-to-date with evidence-based content. According to Planck, "We run a report to extract the order sets out of our EHR and then import them into the third-party system. It looks at our order sets compared to evidence-based and helps us determine what might be missing." Order Sets must be evidence based with hyperlinks out to the supporting evidence.

There is a clearly defined process at Methodist Hospitals for updating and reviewing any order sets that include opioids – involving a wide range of stakeholders, such as representatives from pharmacy, nursing, nursing education and quality. Order sets are grouped by specialty, and the division chief over each specialty is ultimately in charge of providing final sign-off. Approval from the Methodist Hospitals and Medical Council is then required before implementing any order set into production.

Notably, the order set review process is completely electronic. According to Planck, "Each reviewer – usually starting with our pharmacist – receives an email with a link that takes them to the third-party system. They can review the order set, make comments and mark it as 'complete.' The system then notifies us, and we can assign the order set to the next group of reviewers." Planck notes that the fact that stakeholders can work on – and approve – order sets electronically has been key. "We don't have to call a meeting to get everyone in the same room every time we want to update or review an order set," says Planck. "People can do the work on their own time – which really helps streamline the process and makes everything much more efficient."

"From a CIO viewpoint, I love it when interdepartmental committees form to utilize the EHR and other accenting applications to take on critical issues that impact the community we serve. Best practice knowledge and evidence-based solutions provide our clinicians with the data they need to make appropriate decisions for the care of our patients. Providing clinicians with the proper tools and data to address the opioid crisis is key to saving lives."

Tim Diamond, CIO, Methodist Hospitals

Introduction/Background: Care Pathways

Care pathways are more than just order set maintenance. Truly caring for the patient requires more than adjusting orders on how to medicate them (or not). It requires a comprehensive approach, complete with diagnostic and multimodal treatment protocols, expectation setting, education, communication, pre- and after-care planning, coordination of care between facilities, care providers and other experts. Care pathway protocols can be different in different institutions, but often include many of the components listed below.

What resources and special skills will it require? Who should be included? Ownership and involvement can vary by institution, but there are several major themes. First and foremost, at the leadership level, an Opioid Stewardship Committee (or similar organizational body) often sets policy and guidance on care pathway implementation and compliance (*see chapter 1*). IT and clinical informatics teams often play a vital role in driving implementation and adoption. Clinical leadership and subject matter experts (such as department chiefs or pain management specialists) also play a pivotal role. Ultimately, most clinicians and support staff are affected by care pathways, so buy-in by all these stakeholders is necessary. The aspects of care pathways directly leverage IT interventions to affect the greatest impact require human resources and skillsets to perform order set revision and maintenance, install and maintain clinical decision support, enable provider and patient engagement tools, and integrate workflows with EHR's, eRx modules, prescription drug monitoring programs, and other systems can be most beneficial.

Is there anything specific to opioids that needs to be considered? Care pathways are complex and involve multiple dimensions. First, there are considerations specific to treating patients in *acute* pain. Second, *chronic* pain patients have very different issues and care pathways (and these pathways differ depending on the expected course of the underlying etiology). For example, the approach to treating the end-stage cancer patient on palliative care is different from the patient being treated for residual back pain after a motor vehicle crash. Third, acute *overdose* patients require distinct care pathways. Fourth, identifying and treating patients with *addiction* to controlled substances may raise different considerations and require different pathways. Fifth, *withdrawal* from controlled substances is another concern and requires specific interventions and treatment pathways. Ultimately, all these pathways tie into a cycle of addiction that can occur with opioid treatments, and these pathways must be optimized to prevent or break this cycle.

Care providers must also recognize that in addition to prescribed medications, a major component of the opioid crisis stems from the use of *illicit drugs*, such as heroin, fentanyl and car-fentanyl. While this aspect of the opioid crisis is a major source of morbidity and mortality, it is often enabled by “gateway” drugs prescribed by healthcare providers. Aspects of the addiction cycle that IT interventions can directly affect include maximizing treatment of pain by minimizing over-prescribing of controlled substances, maximizing non-opioid treatment modalities, and preventing drug abuse, diversion and addiction.

Guidance and Reference Resources

- **CDC Guideline for Prescribing Opioids for Chronic Pain**

In 2016, the Centers for Disease Control and Prevention (CDC) developed and published the evidence-based *CDC Guideline for Prescribing Opioids for Chronic Pain* to provide recommendations for the prescribing of opioid pain medication for patients 18 and older in primary care settings. Recommendations focus on the use of opioids in treating chronic pain (pain lasting longer than three months or past the time of normal tissue healing) outside of active cancer treatment, palliative care and end-of-life care.

“Improving the way opioids are prescribed through clinical practice guidelines can ensure patients have access to safer, more effective chronic pain treatment while reducing the number of people who misuse, abuse, or overdose from these drugs.”

— *CDC Guideline for Prescribing Opioids for Chronic Pain*

Provider and IT-based organizations have incorporated the 12 evidence-based CDC recommended guidelines into provider-based workflows as a strong foundation for improvement. As is discussed in the next section (EHRA Opioid CDC CDS Implementation Guide), the 12 guidelines can be incorporated as EHR-based pathways and clinical decision support interventions.

CDC Guideline for Prescribing Opioids for Chronic Pain

The CDC Guideline addresses patient-centered clinical practices including conducting thorough assessments, considering all possible treatments, closely monitoring risks, and safely discontinuing opioids. The three focus areas in the guideline include:

1. Determining when to initiate or continue opioids for chronic pain

- Selection of non-pharmacologic therapy, nonopioid pharmacologic therapy, opioid therapy
- Establishment of treatment goals
- Discussion of risks and benefits of therapy with patients

2. Opioid selection, dosage, duration, follow-up, and discontinuation

- Selection of immediate-release or extended-release and long-acting opioids
- Dosage considerations
- Duration of treatment
- Considerations for follow-up and discontinuation of opioid therapy

3. Assessing risk and addressing harms of opioid use

- Evaluation of risk factors for opioid-related harms and ways to mitigate patient risk
- Review of prescription drug monitoring program (PDMP) data
- Use of urine drug testing
- Considerations for co-prescribing benzodiazepines
- Arrangement of treatment for opioid use disorder

- 'CDC Guideline for Prescribing Opioids for Chronic Pain'— United States, 2016, Recommendations and Reports / March 18, 2016 / 65(1);1–49

- **HIMSS EHRA (Electronic Health Record Association) Opioid CDC CDS Implementation Guide**

The [HIMSS Electronic Health Record Association](#) (EHRA) is an association of Electronic Health Record (EHR) companies, addressing national efforts to create interoperable EHRs in hospital and ambulatory care settings. The EHR Association operates on the premise that rapid, widespread adoption of EHRs will help improve the quality of patient care as well as the productivity and sustainability of the healthcare system.

In 2018, the EHRA vendor community formed an opioid task force to research and provide recommendations on how EHR technology can address the opioid crisis. The clinical practice guideline subgroup worked on identifying a set of clinical practice guidelines that can be operationalized to improve opioid stewardship in clinical practice. The group decided to utilize the CDC Guideline for Prescribing Opioids for Chronic Pain. The result is the EHRA Opioid CDC Clinical Decision Support (CDS) Implementation Guide.

In the EHRA implementation guide, there is a section for each of the 12 CDC recommendations for prescribing opioids for chronic pain (outside of active cancer, palliative, and end-of-life care). For each recommendation, details are provided on what EHR's offer to address each item as well as guidance on how a healthcare organization can implement. While there may be some differences across EHR vendors as to how each recommendation is operationalized, the functionality and recommendations are generally available and in common across vendors.

Measuring Success

Care pathways have multiple components, so measuring the success of interventions requires a multifaceted approach. Healthcare systems can track compliance with pathways and recommended best practices, including order set utilization, and alert/clinical decision support acceptance vs. overrides. Most institutions have begun to track total morphine equivalents prescribed by providers. Some institutions track PDMP usage (*see Chapter 6 on PDMP*) and of course, those that have EPCS systems have more robust reporting and auditing mechanisms available (*see Chapter 5 on EPCS*). It should be noted that, whenever possible, metrics should be benchmarked against similar cohorts (i.e. palliative care provider prescription patterns may be markedly different than a typical primary care provider patterns). These are a few key examples, and best practices are likely to evolve over time. Continually tracking progress and finding ways to improve are essential to long-term success. These methods are discussed in greater detail in *Chapter 2 on Dashboards* and *Chapter 3 on Education*.

Patient Considerations

Care pathways can only succeed if they are patient-centric. They should be optimized to achieve the highest quality of care and the best possible patient outcomes, with lowest morbidity and mortality, highest patient safety, highest patient satisfaction, and best possible overall patient experience as possible. The purpose of care pathways is ultimately to treat patients as safely and effectively as possible. They are meant as guidelines to help alleviate pain while minimizing the risk of addiction and substance abuse. They also may provide methods to intervene in cases of “at risk” and already addicted patients in order to treat ongoing pain syndromes and the underlying substance abuse or addiction disorder(s).

Clinical care scenarios are often complex and there are many factors contributing to the cycle of addiction, drug use and abuse. Some of these social determinants and medical comorbidities are beyond the scope of this chapter, but many of the common presentations for acute or chronic pain conditions do have common themes that offer opportunities for intervention. Therefore, the pathways discussed here focus on the interventions that IT leadership can deploy and track to have the highest impact on specific patient outcomes and well-being. Patient engagement, communications, and involvement is essential throughout the process, whether that is in automated triage questions, pre-op care order sets, or discharge paperwork. This is further discussed in *Chapter 7 on Patient Education*.

Chapter 5: Electronic Prescribing of Controlled Substances (EPCS)

Background

What is a “controlled substance”? Any drug defined in the five categories of the federal Controlled Substances Act of 1970. The categories, or schedules, cover opium and its derivatives, hallucinogens, depressants and stimulants. Schedule I drugs have a high abuse potential and no approved medical uses. Drugs in Schedules II to V all have approved medical indications, with decreasing abuse and dependence liabilities as the schedule number increases. Common examples include narcotics, but also many sedatives, anxiolytics, anti-epileptics and medications for attention deficit hyperactivity disorder (ADD and ADHD).

What is EPCS? Electronic prescribing for controlled substances (EPCS), including opioids, replaces the use of paper prescriptions. When a provider uses EPCS, prescriptions are transmitted directly to the pharmacy in the same, secure manner that most prescriptions for non-controlled substances are transmitted today.

Why is it important? EPCS helps address opioid abuse in several ways.

- With EPCS, patients no longer have access to the provider’s Drug Enforcement Administration (DEA) registration number, which reduces the risk of forged prescriptions. Studies show that about 10 percent of providers have had their DEA number stolen [at least once](#).
- In addition, because electronic prescriptions are sent directly to the pharmacy, the risk of a lost, stolen or otherwise diverted prescription is significantly reduced.
- Utilizing an electronic prescribing system also provides a more comprehensive audit trail and database for analytics required to improve prescribing patterns, identify patients in need of help, help reduce overprescribing and improve operational utilization of controlled substances.

In addition to helping combat the opioid abuse epidemic, EPCS offers significant benefits to improving provider workflow efficiency and satisfaction, increasing patient satisfaction, and minimizing prescription errors and inaccuracies.

With EPCS, providers are no longer forced to manage an inefficient dual prescribing workflow—paper for controlled substances and electronic for all other medications—and instead have a single, fast, electronic method for all prescriptions. This becomes especially important as more regulations are put in place that limit how and how often certain

controlled substances can be prescribed (for example, limiting initial opioid prescriptions to just a few days).

Similarly, EPCS gives patients a single, efficient way to have all their medications sent directly to the pharmacy, and in many cases, eliminates the need for a follow-up visit for a prescription refill.

EPCS is also important for complying with the various state and federal laws—as well as industry requirements—for electronic prescribing that continue to gain momentum in response to the opioid abuse crisis:

- In May 2018, Walmart [announced](#) that it will require electronic prescriptions for controlled substances, effective Jan. 1, 2020.
- In October 2018, the SUPPORT for Patients and Communities Act was signed into federal law. Included is an electronic prescribing requirement for all controlled substance prescriptions for a covered part D drug under a prescription drug plan (or an MA–PD plan). The deadline to comply is Jan. 1, 2021.
- In addition to the federal mandate, as of early 2019, 14 states have passed laws requiring electronic prescribing of opioids and necessitating EPCS:

State	Effective Date
New York	March 27, 2016
Maine	July 1, 2017
Connecticut	January 1, 2018
Arizona	January 1, 2019 or July 1, 2019 (depending on county population)
Pennsylvania	October 24, 2019
Oklahoma	January 1, 2020
Iowa	January 1, 2020
North Carolina	January 1, 2020
Massachusetts	January 1, 2020
Rhode Island	January 1, 2020
Tennessee	July 1, 2020
Virginia	July 1, 2020
Wyoming	January 1, 2021
California	January 1, 2022

What resources /special skills will it require? Who should be included? EPCS is governed by the [DEA interim final rule](#) (IFR), one of the goals of which is to “ensure that non-registrants did not gain access to electronic prescription applications and generate or alter prescriptions for controlled substances and to ensure that a prescription record, once created, could not be repudiated.”

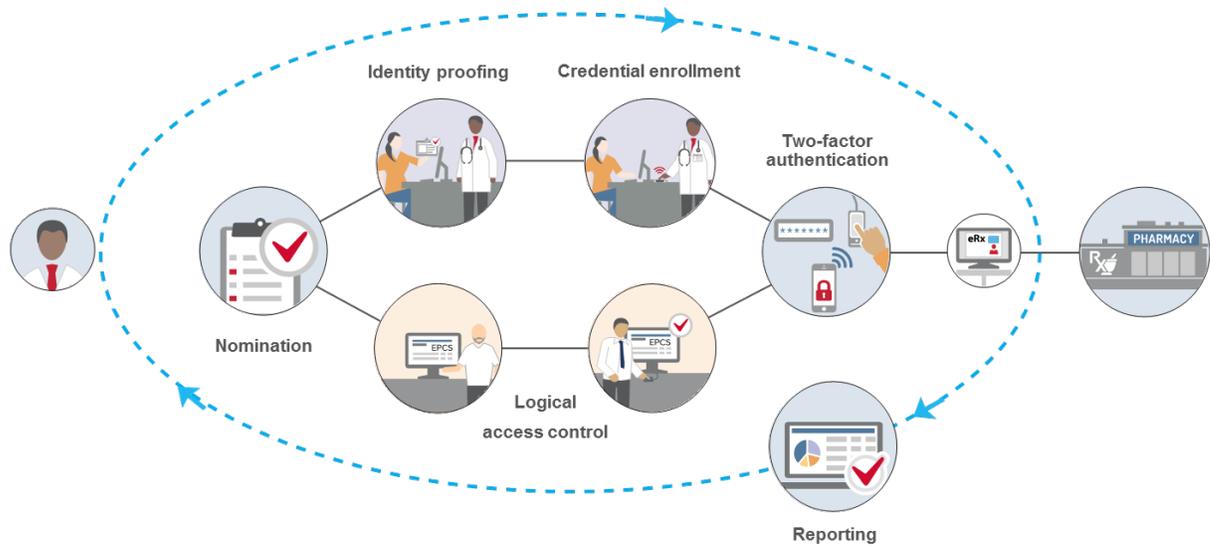
To meet this objective, the DEA IFR outlines specific requirements that healthcare delivery organizations, providers, pharmacies and technology vendors must meet. Some of these requirements include:

- The EHR or e-prescribing application must have a third-party audit that determines that the application meets the requirements of the DEA IFR.
- Providers must complete an identity proofing process to validate their identity.
- A two-step logical access control process must be in place to give EPCS permissions to approved providers.
- Providers must use two-factor authentication when signing an EPCS prescription.

The EHR or e-prescribing application must have detailed reporting in place for “auditable events,” which at a minimum includes:

- Attempted unauthorized access to the electronic prescription application, or successful unauthorized access where the determination of such is feasible.
- Attempted unauthorized modification or destruction of any information or records required by this part, or successful unauthorized modification or destruction of any information or records required by this part where the determination of such is feasible.
- Interference with application operations of the prescription application.
- Any setting of or change to logical access controls related to the issuance of controlled substance prescriptions.
- Attempted or successful interference with audit trail functions.
- The electronic prescription application must analyze the audit trail at least once every calendar day and generate an incident report that identifies each auditable event.
- Any person designated to set logical access controls must determine whether any identified auditable event represents a security incident that compromised or could have compromised the integrity of the prescription records. Any such incidents must be reported to the electronic prescription application provider and the DEA within one business day.

- The breadth and comprehensiveness of these and other requirements necessitate a cross-functional, collaborative project plan that involves many stakeholders across the organization. There are many strategic and tactical components that IT, clinical leadership, pharmacy, application/EHR teams, compliance/credentialing departments and others must put in place to successfully implement EPCS and realize its significant benefits.



The following are some of the important requirements that organizations and providers must meet to comply with the DEA IFR governing EPCS:

Identity Proofing - All providers must undergo identity proofing before they can be issued two-factor authentication credentials to be used for EPCS. This step is required even if providers have already been authorized to prescribe controlled substances at an organization using paper. The DEA allows two methods of identity proofing for EPCS:

- **Institutional** – Hospitals or other DEA-registered institutional practitioners can conduct in-house identity proofing (often conducted by the credentialing office or equivalent). Institutional identity proofing must be conducted in-person, and only organizations with an institutional DEA registration can use this model. At a minimum, providers must present government-issued photographic identification to complete the ID proofing process.
- **Individual** – Organizations can also elect to have providers use a third-party, DEA-approved credential service provider (CSP) or certification authority (CA) for identity proofing. This option can be done remotely, and organizations that are not DEA-registered institutional practitioners must use individual identity proofing.

Logical Access Control – All providers who are approved for EPCS must be given permissions to access the EPCS function within the EHR or e-prescribing application. At least two individuals must be involved in this step, and the DEA requires that the people responsible for setting the logical access controls be different from the individuals conducting the identity proofing (to create a separation of duties). The first individual will configure the EHR or e-prescribing application to give the approved providers permission to use EPCS, and a second individual must approve those permissions. If an organization is using the individual identity proofing model, this second individual must be a DEA registrant and use two-factor authentication to approve the access control settings.

Two-factor authentication – Providers are required to use two-factor authentication to sign EPCS orders. At the time of prescribing, they must enter two of the following three authentication methods: Something they know (i.e., a password); Something they have (i.e., a FIPS-compliant one-time password token); Something they are (i.e., biometrics).

Selecting which two-factor authentication method(s) to use for EPCS is one of the most critical elements of the project, as this will directly impact provider workflow. When selecting two-factor authentication options for EPCS, there are several key considerations, including:

- Ease-of-use – The two-factor authentication workflow for EPCS should be fast and easy for providers. If not, it could create inefficiencies that frustrate providers and impede care.
- Comprehensive options – Not every provider will be able to use all authentication methods, so an authentication solution for EPCS should offer a variety of different options to ensure every provider has access to two-factor authentication to meet DEA requirements for EPCS.
- Flexibility to adapt – Not all authentication options are viable in all prescribing scenarios, so an authentication solution for EPCS should give providers flexibility to use the best options that meet their requirements in any of these prescribing instances.
- Backup authentication options – EPCS authentication solutions should give providers backup options to complete the two-factor authentication workflow to ensure full DEA compliance. This is especially important as state and federal regulations start to mandate EPCS, which eliminates paper as a viable backup option if the provider is unable to complete two-factor authentication.

Record-keeping and reporting – The DEA IFR outline a comprehensive list of recordkeeping, reporting and auditing requirements for all aspects of the EPCS process. For example, organizations must create and retain records of the identity proofing, two-factor authentication credential issuance, and logical access control validation steps for a minimum of two years. Providers are also required to report fraudulent activity as well as lost, stolen or otherwise compromised two-factor authentication requirements. There are also reporting requirements for auditable events and possible security incidents, which organizations may need to report to the DEA. All reporting pertaining to EPCS must be easily readable and readily available to the DEA upon request.

Is there anything specific to opioids that needs to be considered? EPCS applies to all controlled substances, not just opioids. While the DEA regulations govern how controlled substances (including opioids) must be prescribed electronically, as noted above, multiple states actually mandate that EPCS systems are in place by certain dates. Of note, Prescription Drug Monitoring Programs (PMPs, or PDMPs) are not the same as EPCS. Some states require one, but not the other, so provider systems need to be aware of their own state(s)' mandates. Furthermore, hospital policies, medical boards and local care practices may also need to be accounted for. For example, some state mandates may place limitations on the number of narcotics prescribed for an acute issue, while other states may not. And some hospitals have different prescribing policies than others. In any case, EPCS is a way to leverage the safety methods, default settings, and alert systems of the e-prescribing module of the EMR, while also maintaining compliance with federal/DEA and state mandates.

Real World Examples

- [Geisinger: Leveraging EPCS to combat opioid abuse while saving \\$1M per month](#)
Geisinger Health System is a 767-bed health system serving 3 million patients in Pennsylvania and New Jersey. In an effort to address opioid abuse, Geisinger implemented a comprehensive approach that included encouraging non-opioid reliant therapies, leveraging the Pennsylvania state prescription drug monitoring programs, linking the provider dashboard to their EHR and enabling EPCS. This approach allowed Geisinger to reduce opioid prescribing by 50 percent, with even higher reductions as the program continued. The EPCS initiative has also generated a significant cost savings of nearly \$1 million per month by eliminating inefficiencies associated with paper prescriptions.
- [Hartford HealthCare: A blueprint for EPCS success](#)
Hartford HealthCare is a 1,954-bed system based in Hartford, Conn. In June 2017, the state of Connecticut passed a new law mandating EPCS. Moving to EPCS would ultimately deliver a single, electronic prescribing workflow for all medications and address the challenges of paper prescriptions. However, given the complexity of the DEA requirements for EPCS, Hartford HealthCare needed to develop a comprehensive plan to roll out a fully compliant EPCS solution in time to meet the deadline. As a result, Hartford HealthCare was able to improve workflow efficiency, increase provider and patient satisfaction and decrease the risk of drug diversion and fraud.

Measuring Success

Some of the measurable success metrics for EPCS include:

- EPCS utilization rates
- Reduction in paper prescriptions (and associated costs)
- Time savings for providers and other staff (including the associated cost)
 - There is a group of providers who legitimately need to prescribe these medications at an order of magnitude higher than others, such as oncologists or palliative care specialists. Like any workflow, there are advantages and disadvantages of EPCS. The ability to cancel or transfer eRx's when a pharmacy is closed or does not have the prescribed medication in stock is a consideration that needs to be accounted for in the process planning and execution. Many provider systems view this as an opportunity to re-examine their workflows on selection of pharmacy and assure that they are defaulting to those pharmacies that are preferred by the hospital, provider, and/or patients. This will vary by hours of operation, geography, medications on formulary and ability to communicate with prescribers proactively and retrospectively.
- Reduction in pharmacy callbacks (including the associated cost)
- Patient-specific measures:
 - Patients, who are typically exhausted and in pain after a surgical procedure or hospital stay, should experience a decreased wait time at a pharmacy. The prescriber will determine which pharmacy was able to fill the required prescribed drug and direct the patient/care giver to that pharmacy.
 - While EPCS can help prevent fraud, drug diversion, abuse and addiction, it can make it *easier* for patients who truly need controlled substances to get their medications filled in a timely and convenient manner.
 - It is important to remember that there are many patients who legitimately need controlled medications, opioids included, and care providers should be careful not to perpetuate a stigma or bias on this population of patients.

Helpful Resources

- [EPCS Checklist: A step-by-step project planning guide](#)
- [Find E-Prescribing & EHR Software for Providers](#)
- [Surescripts 2017 National Progress Report](#)
- [Map of state EPCS requirements](#)
- [Drug Enforcement Administration \(DEA\) IFR: Electronic Prescriptions for Controlled Substances](#)

Chapter 6: Prescription Drug Monitoring Programs (PDMPs)

PDMP History and Current Footprint - From the First PDMP to Today

Prescription Drug Monitoring Programs (PDMPs) are not new – indeed, their history dates to about a century ago when New York became the first state to require reporting. That short-lived program and subsequent state PDMPs throughout most of the 19th century applied strictly to Class II drugs, typically cocaine, morphine and, until banned in 1924, heroin. Data collection was managed via serialized, multi-copy, state-issued prescription forms, one copy of which generally had to be sent to the state within 30 days.

In 1990, when Oklahoma became the first state to require electronic submission, use of paper forms began to disappear and as of early 2019, only California and Texas required serialized paper forms. New York has virtually eliminated their paper form requirement by mandating the e-prescribing of all drugs.

Recognizing the potential value of the collected data, the federal government began to make funding available through grants to states to establish, implement or enhance PDMPs. With this motivation, 27 states established new PDMPs in the first decade of the 21st century and by 2015, all states except Missouri, which has a county-based PDMP that serves more than 75 percent of the population, had established PDMPs. In early 2019, there were 54 PDMPs in the U.S., accounting for 49 states, the county-based Missouri program, and programs covering Washington D.C., Puerto Rico, Guam and the Department of Defense Military Treatment Facilities.

PDMPs were birthed from a law enforcement perspective – so much so that in some states, clinicians were originally denied access. Because Substance Use Disorder (SUD) was considered a character flaw and not a recognized disease at that time, the focus of the reporting requirements was to create a policing and enforcement tool, not a clinical tool. The right of states to implement PDMPs for this purpose was challenged in 1977 in New York and that right was upheld by the U.S. Supreme Court.

Fortunately, that paradigm has slowly changed. Today, SUD is a well-recognized disease with broadening support structures to help manage it. In that vein, the purpose of PDMPs has also been altered. Their expressed intents now encompass a broader set of goals;

1. To ensure patient access to appropriate pharmaceutical care
2. To improve prescribing and dispensing decisions by providing a clinical tool to assess the risk of controlled substance drug therapy for patients
3. To deter diversion, misuse and abuse

Over time, the quality and scope of the data collected by PDMPs has evolved and improved as well. In 1990, Oklahoma became the first state to require the electronic submission of prescription records by pharmacies. As the PDMPs migrated to electronic processes, they also consistently increased the frequency of reporting; currently the great majority require record submission daily or more often.

Likewise, following the addition of all Drug Enforcement Agency (DEA) CIII – CV records to the reporting requirement by Nevada in 1995, the scope of the reporting requirements broadened across the nation. Today, all PDMPs require the submission of CII – CIV drugs and many also include CV drugs, state scheduled drugs or “drugs of concern.”

PDMPs also all generally report the same information to prescribers and pharmacists. In terms of prescription data, PDMP reports include, at a minimum, fill date, drug, quantity, days’ supply, prescriber, pharmacy, number of refills, morphine milligram equivalents (MME), MME/day and payment type.

PDMPs are amid another data revolution as well. As the volume of opioid prescriptions falls and the death rate continues to rise, PDMPs are adding additional data to help prescribers and pharmacists understand patient risk. PDMPs such as Utah’s and Wisconsin’s are making overdose or drug violation history available to prescribers that query their PDMP data, and many other states are pursuing similar initiatives. The inclusion of non-prescription data is in its infancy but holds immense potential for better clinician assessment of the patient’s true risk.

As mentioned above, although PDMPs were, from inception, contemplated and constructed for the benefit of law enforcement, that paradigm has undergone a titanic shift in the last two decades. Where law enforcement may have been not just the primary accessor to PDMP records, but even the sole accessor, a multitude of additional roles have now been given authorized access. Depending on the state PDMP, access is now available for clinicians, state board of pharmacy employees, drug courts, medical examiners, drug abuse counselors, Medicaid administrators, etc. And contrary to the original intent, access for law enforcement is typically now restricted to bona fide, active criminal cases. “Fishing expeditions” are no longer authorized.

In terms of clinician roles, PDMP laws are highly specific regarding access and often vary by state. Typical roles that are allowed access to PDMP platforms include physicians, physician's assistants, nurse practitioners, and pharmacists. Some states, however, prohibit access by physician's assistants. When accessing the PDMP portal, most states also allow delegate access. Generally, a delegate is defined as an agent authorized by a physician to assist in executing patient PDMP searches to reduce the burden on the physician. An example of a delegate would be a nurse in a physician's practice who request PDMP reports for the day's scheduled patients each morning.

The shift in approach can also be seen in the agency through which the programs are managed. Whereas most programs were originally managed by a law enforcement agency, PDMPs are now managed by any of the following entities: the state Bureau of Narcotic Enforcement, a Health Department, the Attorney General's Office or the State Board of Pharmacy. Importantly, only three states remain as of early 2019 where the PDMP is managed by a law enforcement agency.

The evolution of PDMPs

Despite the tremendous potential value of PDMPs, until recent years the programs were hampered by several deficiencies and difficulties. PDMPs have evolved, however, and several key innovations have boosted their utilization and effectiveness.

Breaking Down the Siloes

As state-based programs formed early this century, they were created without the ability to share data. If a patient filled a controlled substance prescription in another state, that dispensation would not be reported to the patient's home state PDMP, potentially providing clinicians only a partial view of a patient's controlled substance prescription history.

For the most part, this dynamic no longer exists today. Interstate data sharing is now facilitated through PMP InterConnect, which connects 49 of the 54 PDMPs, or RxCheck, which connects four PDMPs. These systems enable clinicians to view multistate data in every PDMP report. Due to various factors, not every state shares with every state, but almost all states share with all of their border states.

Florida had a law prohibiting data sharing until July of 2018 but is now rapidly adding states with which they share, and as of January of 2019 shared with Alabama, Georgia, Mississippi, South Carolina and Ohio. California, too, had a law prohibiting sharing with other states. That changed in January of 2019, and they are expected to begin sharing in June of 2020 once they have developed their supporting regulations.

Revolutionizing Efficiency of Access

PDMPs were also formed with the ability to expose data and information to users through a web portal only. Using this portal requires clinicians to exit their EHR or pharmacy management system, log in to the PDMP portal with a user name and password, and perform a manual patient search by entering patient demographic data, such as first name, last name, date of birth and zip code. Studies have shown that using the PDMP in this manner on average consumes over four minutes of a clinician's valuable time.

States responded to the onerous nature of this process by allowing clinicians to use delegates to access PDMP reports in advance of the patient visit (e.g., each morning for the patients with scheduled visits that day). Nevertheless, this access method led to very low utilization rates of the PDMP by clinicians, as low as 10 percent in many cases.

States again responded to this low utilization by passing laws mandating that prescribers check the PDMP before prescribing a controlled substance. Over 40 states now have such laws (the specifics from one state to another can differ). Mandatory use laws have indeed achieved their purpose – increasing utilization of the PDMP – but at the expense of clinician burden.

The great news on this front, however, is that in recent years the industry has made significant strides in enabling the integration of PDMPs into electronic health records, pharmacy management systems and health information exchanges. While the specifics of various approaches can differ, these technologies enable clinicians to access a patient's PDMP report from within the EHR in one click.

Depending on the state, over 100 EHRs may currently have this capability natively enabled in their systems, ask your vendor about what PDMP integration is available and what is planned.

Becoming More than a Prescription Registry

In the early years of PDMPs, they primarily served as prescription registries. In recent years, however, the programs have evolved far beyond this paradigm, to the point where "registry" is certainly an inaccurate description and "prescription drug" is even rapidly becoming a misnomer.

As the prescription drug problem continued to worsen over the years, the federal government has dramatically increased funding to states for their PDMP. As a result, PDMPs added, and are continuing to add functionality to provide clinicians with as much assistance as possible in interpreting the data and making decisions. Initially these features included state-mandated clinical alerts sent to clinicians identifying patients who were exhibiting particularly risky prescription patterns, such as number of pharmacies in a

defined time period, number of prescribers in a defined time period, and MME/day. These features then evolved, in states like Wisconsin and Michigan, to include visualizations of the data and more advanced representations of risk, such as predictive analytics and patient risk scores.

Additionally, the opioid crisis has resulted in funding for many research projects that have identified risks that are not necessarily reflected in the typical prescription data. Increased risks are strongly associated with numerous other factors, such as overdose history, incarceration and toxicology results. In an attempt to present an increasing number of risk factors to clinicians, multiple states now make these additional data sets available in the PDMP.

And finally, states are beginning to add functionality to the PDMP to aid clinicians in addressing risk and intervening with patients. They can include messaging capabilities, treatment locators and educational materials.

Importantly, most states require that when EHRs integrate “PDMP data” or “the PDMP,” they integrate the full report and functionality, including all information, analytics, visualizations and capabilities.

Alternatives for PDMP Access

Overview

Due to varying state requirements and laws, integration approaches can differ, even from the same vendor. These requirements are in support of and for the enforcement of the intended uses of the data, which are generally far more specific than other healthcare data privacy rules such as Health Insurance Portability and Accountability Act (HIPAA).

In a few states, the raw data itself is allowed to flow into the electronic health record system. In other states, the data itself is not allowed to flow into the system but the system can store a “view” of the report, such as a PDF. And in other states, systems are only allowed to display the report view, which then disappears. Each scenario has its advantages, but all three are significant improvements over the portal experience.

Additionally, in most situations and unlike the portal, delegates are not allowed access to integrated PDMP reports. This limitation leads to enhanced security, and because the process of accessing and viewing the report is so efficient, delegates are not necessary.

Nationwide, there are several options available for integration of PDMP reports into EHRs. The details of these options vary, and the availability of each option in each state varies as well.

National Association of Boards of Pharmacy/Appriss Health (PMP Gateway)

As referenced above, PMP InterConnect is a national data-sharing hub that connects 49 of the 54 PDMPs to enable the flow of multistate data to clinicians. PMP Gateway is the integration technology and service for InterConnect, enabling the flow of multistate PDMP reports into EHRs and pharmacy systems.

PMP Gateway is natively integrated into over 100 EHRs and almost every major pharmacy system, letting health systems and physician practices enable the integration with minimal effort. As of early 2019, it was approved for use, and in use, in 38 states, and 14 states fully fund it for every prescriber in the state. Across those 38 states, it is used by 300,000 clinicians and delivers almost 25 million PDMP reports into clinical workflow per month.

Operationally, PMP Gateway automatically launches a multistate patient PDMP request upon an event predetermined by the health system or practice, such as upon patient registration or upon chart opening. The report is retrieved and available for viewing, very rapidly appearing when a “View Report” button is pressed. The report is presented in html format, enabling Appriss to automatically ensure that the integration is fully compliant with the individual laws of each state whose data is presented. This ensures that multistate data is never inhibited by an implementation that may violate some states’ requirements. Additionally, using this methodology, Appriss can update the reports as state requirements change so no configuration change is required on the part of the health system or EHR vendor.

Additionally, PMP Gateway can integrate the Appriss NarxCare substance use disorder platform, which is the default integration in some states and optional in others. NarxCare features predictive analytics, visualizations and clinical tools to equip health systems with greater capabilities and more fully integrate with an opioid stewardship strategy. The predictive analytics and visualizations enable clinicians to more quickly evaluate risk, and the clinical tools enable clinicians to more effectively intervene with patients. Additionally, the scores are returned to the EHR as discrete data elements, and most health systems choose to include them directly in the patient’s chart. This enables clinicians to view the scores for every patient and creates awareness for which patients they want to view the full PDMP report.

PDMP Integration

Most states allow PDMP integration within the EHR, and most EHRs support this integration. Each state determines not only how the PDMP will be established, but also the methodology for how EHRs will integrate with it. There are significant differences between the states on their approach. The first step in the operationalization of PDMP integration with the EHR is to understand how your state has chosen to support this integration.

Making PDMP information available within the EHR is usually accomplished with a National Council for Prescription Drug Programs (NCPDP) interface, or via Single Sign On to a web portal, or both. Again, state regulations will determine which method(s) are supported. Using an NCPDP interface is often advantageous because such technology allows the EHR to consume PDMP data discretely. Such integration allows the EHR to provide decision support and risk scoring. Additionally, if the state allows, the NCPDP query of PDMP can be performed automatically and prospectively, so that the data is readily available for clinician reviewing. Using the Single Sign On (SSO) approach is self-explanatory. The user will click a button in the workflow, and the SSO integration will send user credentials and patient lookup information from the EHR to the web portal that is providing access to PDMP data, which is then opened often as a window within the EHR. While this SSO method is still much more efficient than no integration, the PDMP data is not brought in to the EHR discretely, reducing the EHR's ability to provide decision support with the information.

Sometimes the state will develop and maintain its own PDMP database, but this is rare. Kentucky is an example of this approach. The more common approach is the state will select a PDMP vendor to assist them in managing the integration of the PDMP with EHRs. PDMP vendors include Appriss, NIC and LogiCoy. Appriss, mentioned previously, is by far the most commonly used vendor, currently working with the majority of states. LogiCoy is the PDMP vendor for Illinois, and NIC has worked with Wisconsin and Chesapeake Regional Information System for our Patients (CRISP), a health information exchange serving Maryland, Washington, D.C., and West Virginia.

Interstate sharing of data between each state PDMP database is usually accomplished through one of two mechanisms: PMP Interconnect and/or RxCheck. PMP Interconnect is owned by the National Association of Boards of Pharmacy, and Appriss is their technology solution provider. Appriss offers an API to PMP Interconnect called PMP Gateway. Over 45 states share data via PMP interconnect. In order to participate, the state must sign a memorandum of understanding (MOU) that ensures compliance with multistate requirements but also prevents healthcare systems from consuming data discretely into their EHR. The other interstate sharing solution is RxCheck.

RxCheck is funded by grant funds to provide a no-cost solution to participating states and was developed by the U.S. Bureau of Justice Assistance.

Pros of PMP Gateway

- Delivers multistate data from 49 PDMPs (as of this writing New York was not integrated)
- Proven solution in use by 300,000 clinicians, delivering 25 million reports per month
- Natively integrated with over 100 EHR systems, providing for easy activation by health systems and practices
- Account management and 24/7 customer support included
- Automatically configures and enforces all state rules and regulations, assuring health systems that they remain in compliance
- Automatically captures PDMP access audit trail, providing evidence of compliance with mandatory use laws
- Fully compliant with all mandatory use laws
- Vetted by 38 states and independent auditors for security, privacy and HIPAA compliance
- Accommodates for continuous changes in state PDMP laws, statutes and policy enabling a consistent integration approach on an enterprise level. A consistent approach is enabled in the 38 states in which it is live, and Appriss manages all state-required changes on the back end, preventing health systems or vendors from having to make configuration changes as state requirements change.

Cons of PMP Gateway

- Does not deliver raw data into EHR systems in order to ensure compliance with multistate data requirements

Pricing

- 14 states fully fund the PMP Gateway solution, providing it at no ongoing cost to every prescriber in the state. Depending on the EHR vendor, the vendor may charge a nominal setup fee to establish the connection.
- In states that don't fund the solution, EHR vendors/Appriss may charge a fee per prescriber per year for access to the system. Pricing may vary depending on the vendor and whether the health system elects to receive a "basic" PDMP report or the NarxCare solution. Volume pricing is usually available for large numbers of prescribers.

Contact your EHR vendor for specific pricing information.

Real-World Examples

Accessing PDMP data outside of the EHR can be a time-intensive process for clinicians.

MetroHealth in Ohio describes this process as taking several minutes and requiring the clinician to navigate to several different pages and type as many as 60 characters. Such practice leads to low adoption of checking the PDMP despite a legal requirement to do so, and significant physician unhappiness with the process. Fortunately, there is often a better way to integrate PDMP data into the workflow within the EHR. When MetroHealth turned this functionality on, they reported the improved workflows took one click and just a few seconds.

The state of **Wisconsin** manages their PDMP database autonomously as opposed to partnering with a third-party company to do so. Wisconsin allows EHRs to connect directly to their PDMP through their own web portal. Wisconsin's PDMP, like PDMPs of most other states, supports interstate sharing. This means that providers accessing the PDMP in Wisconsin can see PDMP data from neighboring states too. This approach of direct connection to the PDMP is also used in **California**.

Maryland took a different approach with their PDMP. The Maryland PDMP was established and is maintained by their state HIE named CRISP. EHRs will connect to CRISP to access PDMP data. Maryland's PDMP supports interstate sharing as well. This approach of incorporating the state HIE is also used in **Nebraska and Washington**, among others.

Improve Access

Health systems should require as part of their credentialing/onboarding process of at least prescribers and pharmacist's proof that individual registration with the state's PDMP has occurred.

Health systems should always budget for and obtain as many access points to remove barriers as possible.

- As a base, everyone who can get access should have access to the state's website.
- As a next step, if possible with currently technology and in the state in which the facility resides, every prescriber should be able to call forth a report before (in-application) or during (in-workflow) the prescribing process.
- As an additional/optional step, if applicable, the facility should work with their technology vendors to allow any and all roles allowable by the state as on-boarded for web access in step A1 to use in-application access.
 - This will involve both the data courier/connecting entity/state as well as the EHR vendor as additional data will need stored in the EHR for this to work properly.
 - Partnerships can and should be formed between faculties, states and technology vendors to make the overall process more streamlined and functional overall.

Improve Consistency of Use and Application

- Health systems should evaluate the quality and satisfaction of the providers utilizing the system.
- Health systems should work with their technology vendors to get statistics on how often the data is being accessed (if possible and legal in the state).
- Health systems should (if possible) monitor the prescribing of controlled substances (especially opioids) vs. the access of the PDMP functionality.
 - This will prove difficult given current technology standards but should be possible and worked toward.
 - Unless dictated by law, "I did it" type recording of usage should be avoided at all costs.
- Health systems should provide any and all feedback about integrated functionality requests to both vendors and states to help improve the programs.
- Health systems should stress a culture of care over compliance.
- Health systems should monitor for and evaluate at regular intervals instances where a PDMP report resulted in a good catch as well as times where the data was misinterpreted and resulted in under-prescribing or no prescribing when some should have happened.

Measurement and quality improvement

- Usage by prescribers
- Compliance by prescribers
- Usage by non-prescribers
- Advances or requests for better usage
- Data gaps (to be reported to vendors and states)
- Stopped scripts
- EPCS systems should measure the number of times a report was viewed and then the script was cancelled. Something like this could be done in a vendor-agnostic way as well.
 - These could/would/should be clinically reviewed (almost like Tumor board) to see if there are any cases where things should or should not have happened. This will help with the applicability of use

Integration with Other Opioid Stewardship and SUD Initiatives

Improving access over all types and focusing on in-application data streams when and where available will greatly help with any such initiatives when allowable by state law. Making PDMP an integral part (again if legal in the state) of any SUD or stewardship program as part of an interdisciplinary approach would be ideal.

Support Resources

National Association of State Controlled Substances Authorities (NASCSA) - www.nascsa.org

National Alliance for Model State Drug Laws (NAMSDL) – www.namsdl.org; <http://www.namsdl.org/prescription-monitoring-programs.cfm>

National Association of Board of Pharmacy – Interconnect, the National Network of State based PDMPs: <https://nabp.pharmacy/initiatives/pmp-interconnect/>

***CHIME Opioid Task Force – PDMP/EHR Vendor Strategy Survey Results – Page 88**

Chapter 7: Patient Education

Background

Most patients are acutely aware of the national opioid epidemic – whether being personally affected by an opioid-related tragedy or just seeing the chilling statistics on the news. This heightened awareness has made patient education more important than ever, though. There is now an *expectation* from patients and family members that hospitals will not only proactively provide education about opioids, but also will be able to address specific concerns and questions. The sheer amount of news coverage also means that some patients may have misconceptions about opioids – and pain management – that need to be dispelled. Technology increasingly plays a more prominent role in efforts to educate and engage patients about opioids, but it is still early – and IT-centric approaches are still evolving.

“Patients and family caregivers should receive real-time education at the time of initial prescription, prescription fulfillment, and on an ongoing basis. Patients and family caregivers also should be engaged in setting realistic pain management goals based on expectations for safe and effective pain relief and functional outcomes. Patients should know how to use opioids safely once they have left the healthcare setting, and thus the healthcare team must teach techniques for safe drug use, storage, and disposal, as well as signs of drug overdose, diversion, and opioid use disorder (OUD).”

- [NQF “Playbook” on Opioid Stewardship \(March 2018\)](#)

Patient Education with Joint Decision Making and Treatment Agreements

Prescribers should engage patients in a conversation about their expectation for pain and options for management. This requires patient education. Education should include considerations that address biopsychosocial factors with pain care:

- Defining and understanding contributing factors associated with pain
- Education on types of pain and factors that can influence or impact pain
- Differentiation of pain management strategies for acute and persistent or chronic pain
- Education on treatment options including non-pharmacological alternative methods for reducing and managing pain

It is important for care team members to direct patients to credible sources of health information, as an uninformed patient can be easily misdirected by divergent and sometimes false information. (See the “Resources” section for a list of credible sources.)

Shared decision making and use of treatment agreements will assist providers to review realistic benefits, risks and side effects (both common and serious), as well as alternative

treatment options with the patient (see Table 1). Health systems and hospitals must fully support providers in helping connect patients to resources, appropriate treatment, social support and the help they need.

Table 1. Patient engagement and shared decision making requires:

- Discussing benefits, risks and side effects of opioid use, and providing clear and easy-to-understand educational materials
- Offering alternative pain management options
- Assisting patients to focus on managing acute pain during healing and improve functionality
- Discussing safe storage of opioid medications, including keeping out of reach of others
- Encouraging questions and providing follow-up opportunities

The Role of Technology in Patient Education

IT has proven to be an effective means for accurately *identifying* patients at risk for opioid misuse (see “Real World Examples” below). Technology is even increasingly playing a role in *treating* opioid use disorder (OUD); in fact, the first prescription digital therapeutic for patients with OUD [was approved by the FDA](#) in December 2018. When it comes to *educating* patients about the risks of opioids, though, approaches at most hospitals and health systems to date have been fairly “low tech” – focused primarily on paper handouts, printed discharge instructions and general content pushed to the patient portal.

However, technology is starting to play a more prominent role in efforts to educate and engage patients about opioids, especially as leading hospitals and health systems are beginning to approach chronic opioid use the same way they approach *other* chronic conditions. For example, organizations like Ochsner Health System have built and implemented a custom registry of chronic opioid patients to serve as the foundation for their targeted education and outreach efforts (see details in “Real World Example” below). Tools from enterprise EHR vendors are also maturing.

Moving forward, technology will play an even bigger role in helping to provide patients with personalized, easy to understand, clinically effective educational content about opioids at appropriate points in the patient journey (through multiple mediums and platforms).

For example:

- Using chronic disease outreach tools in novel ways to address opioid education
- Electronic alerts embedded in clinical workflows *at defined points of care* reminding clinicians to provide patients with educational materials about opioids and/or direct the patient to appropriate resources or services

- Automated point-of-care recommendations and suggestions to providers about specific educational content, resources and/or services *based on a patient's unique circumstances and risk level for opioid misuse*
- Automatically pushing *customized, patient-specific* educational content about opioids and pain management to patients' mobile devices
- Real-time integration of new types of interactive digital education into existing patient-facing apps and tools
- Tracking/monitoring which patients have received opioid education (including when, what type of content, etc.)
- Quantifying/measuring which types of educational content and engagement initiatives are most effective (or most valued by patients)

Real World Examples

Ochsner Health System

Ochsner's (Southeast Louisiana) opioid stewardship efforts began in 2015. According to Todd Burstain, MD, the CMIO at Ochsner Health System, "Our approach to patient education and outreach started with some posters about narcotic use in our emergency department and clinics. Those didn't really move the needle, though. We realized that effective outreach and education required a solid foundation of analytics and reporting.

Two of our top priorities were to 1) accurately separate *chronic* opioid users from *acute* opioid users, and 2) identify which chronic patients might be at risk for opioid misuse." Ochsner built a chronic opioid registry and implemented a customized Opioid Risk Tool. Chronic opioid patients were categorized as either "high" risk, "medium" risk, or "low" risk, based on factors such as frequent early refill requests, recent dose escalations, as well as factors related to social and family history.

Burstain points out, "Knowing our chronic opioid patients' level of risk was critical, but we also wanted to take the next step and actually monitor – and *engage* – those patients."

After sitting down with a team of experts, Ochsner established specific requirements for chronic opioid patients depending on their risk level, managed through the Health Maintenance section in Epic (see rules below). Importantly, these tasks were *also* pushed to the patient portal. Per Burstain: "So when one of our chronic opioid patients logs into Epic MyChart, they might see they are overdue for a mammography or colonoscopy, and right there alongside that information is a reminder that we would like them to sign a pain contract, or an alert that they need to refill their Naloxone prescription."

Health Maintenance Topic Rules

<u>Low Risk</u>	<u>Medium Risk</u>	<u>High Risk</u>
<ul style="list-style-type: none">• Opioid Risk Tool completed• Pain Contract signed	<ul style="list-style-type: none">• <i>Same as Low Risk</i>• Urine test – yearly	<ul style="list-style-type: none">• <i>Same as Medium Risk</i>• Urine test – every 6 months• Naloxone Rx – yearly

Source: Adapted from "Opioid Stewardship Davies Presentation," Ochsner Health System, 2018

After the registry was created, Ochsner also crafted a letter to all of their chronic opioid patients (see sample below). The letter included background on the opioid epidemic, outlined the patient's specific care plan and risk level – and most importantly, emphasized that Ochsner's top priority was to provide them with the safest care possible. According to Burstain, "We found that our patients were extremely grateful for our outreach efforts. One of the most common responses we heard was *'thank you – I had no idea that I was even at risk.'*"

Sample of Ochsner Patient Letter

At Ochsner, one of our most important priorities is providing safe medical treatment to you.

Our records show you have been prescribed a controlled pain medication, also known as an opioid or narcotic. Considering the current national crisis concerning these medications, Ochsner doctors are working closely with patients to ensure controlled medications are used appropriately.

For your safety, Ochsner health care teams follow these new national care guidelines:

1. You will have only one doctor responsible in prescribing your controlled pain medications.
2. You will participate with your doctor in developing a pain contract and treatment plan.
3. Your doctor will regularly check the Louisiana Prescription Monitoring Program.
4. You may be asked to comply with periodic urine drug screenings.
5. Your doctor may discuss with you a medication to reverse an overdose.
6. You must store your medication safely and not share it with others.
7. You should not change the medicine amount you take unless your doctor tells you to change it.

Your health care team will talk with you about the controlled pain medicines you may be taking at your next visit. In the meantime, if you need to schedule an appointment or begin care with a new doctor, call 1-866-OCHSNER (1-866-624-7637) right away to avoid a delay in your care.

Thank you for choosing Ochsner.

Sincerely,
Your Ochsner Health Care Team

Learn more about the national opioid crisis
by visiting the Centers for Disease Control website at
www.cdc.gov/drugoverdose/opioids

Source: "Opioid Stewardship Davies Presentation," Ochsner Health System, 2018

In terms of outreach and education to a broader patient population, Ochsner worked with local experts to create a do/don't list for opioids. Any time an Ochsner patient is prescribed an opioid, that educational sheet is automatically included in the after-visit summary (both post-hospital discharge or after an outpatient visit). Additionally, any Ochsner patient with pain in his or her problem list is given access to related digital content through the patient portal.

Keys to Success:

- **The right message.** According to Burstain, "Patients need to know you are doing this because you care. It isn't about some law or regulation – it is about their *safety*."
- **Help patients understand the risks.** Even though most patients may be aware of the opioid crisis, they may not know the specific risks; how opioids may interact with other medications, the dangers of mixing opioids with alcohol, or the importance of storing their medications in a safe place.
- **Explain the options.** "There are a lot of alternatives to opioids that patients may not know about," says Burstain. "For example, we are using virtual reality to help distract patients from the pain of certain procedures and minimize their initial exposure to opioids. It is critical that patients understand all of the options."

CoxHealth

When CoxHealth (Southwest Missouri) established a multidisciplinary team in January 2018 to respond to the opioid crisis, a subgroup under the committee was created specifically to lead the organization's patient education efforts. The Education Task Force decided to focus on the highest utilizers of opioids in the health system – CoxHealth surgical patients.

A list of specific education topics – not just about opioids, but *pain management* as well – was developed by the task force (see below). CoxHealth deliberately decided to provide education to surgical patients through multiple mechanisms: pamphlets, videos and discharge instructions. According to Tina Tarter-Hamlet, RN, patient education coordinator at CoxHealth, "Not every patient learns the exact same way, so we felt a combination of educational approaches was important. Communicating information in different ways can also help reinforce key messages."

Topics of Patient Education

- | | | |
|---------------------------------|------------------------------|------------------------------|
| • How pain is measured | • Adverse effects of opioids | • Locking up opioids |
| • Other methods to control pain | • Side effects of opioids | • Disposal of opioids |
| • Personal goals | • OTC pain medicine | • What to do for an overdose |
| • Taking opioids safely | • Avoid misuse/abuse | |

(Source: Adapted from "Confronting the Opioid Crisis: A Team Approach," TeleHealth Services / CoxHealth, 10/11/18)

Another key priority was to ensure that CoxHealth surgical patients receive education about opioids and pain management at frequent touchpoints during their journey. “We have a customized education plan for each phase of care,” notes Tarter-Hamlet.

For example, education starts with a pamphlet in the physician’s office as soon as the patient finds out they will be having surgery. According to Tarter-Hamlet, “We use the pamphlet as a way to start a dialog with the patient. We talk about pain management, different ways to control pain, and their specific pain goals. If a patient is having surgery, they are going to have pain. We want them to understand that a pain score of 0 is not realistic.”

At the preadmission phase, surgical patients watch a “Pain Management after Surgery” video. Then, following all inpatient surgeries – after the effects of anesthesia have completely worn off – patients are shown a video that includes topics such as how to rate their pain and alternative ways to control pain other than medication. At many of CoxHealth’s hospitals, the educational videos can be delivered directly to the patient’s room. (See screenshot below.)

CoxHealth’s Interactive Patient Education System



(Source: “Confronting the Opioid Crisis: A Team Approach,” TeleHealth Services/CoxHealth, 10/11/18)

Finally, at discharge, surgical patients watch a Centers for Disease Control and Prevention video about prescription opioids and a CoxHealth-produced “Pain Management at Home” video. Those videos are also made available to family members and caregivers.

Notably, *all* CoxHealth patients – not just surgical patients – receive educational information about opioids in their discharge instructions. Per Tarter-Hamlet, “Many people may already have opioids in their home. Providing information about how to properly dispose of those medications, or when to seek emergency medical care in cases of an accidental overdose, is something that applies to *everyone* – not just surgical patients.”

Keys to Success:

- **Deliver key messages in multiple ways – and multiple times – throughout the patient journey.** According to Tarter-Hamlet: “Patients may not understand everything the first time they hear it. We found our patients really appreciated all of the different touchpoints, and not just having everything thrown at them at the end.”
- **Value from video education.** “We’ve really embraced video education here at CoxHealth,” says Tarter-Hamlet. “When patients are watching a video, multiple senses are engaged – they can see *and* hear the information we are providing them.”
- **Educate the educators.** Per Tarter-Hamlet: “Many patients are going to have questions after watching a video about pain management and opioids. It is critical that whoever is showing them the video has the resources they need to be comfortable answering those questions. To that end, we made sure to invest a lot of time educating our nurses. We really want our patients to be active participants in this process – asking lots of questions and getting the answers they need.”

Payer Example – Aetna, a CVS Health Business

Payers are in a unique position to respond to opioid addiction, with access to many more and different levers than traditional provider organizations typically have (e.g., the ability to waive naloxone co-pays, eliminate pre-authorization for certain treatments, etc.). When it comes to patient education and outreach, though, both payers and providers offer common keys to success.

One excellent example is Aetna's "Guardian Angel" program, which is part of the company's holistic three-pillar strategy implemented in 2016 to improve OUD prevention, intervention and support.

Launched in March 2018, the Guardian Angel program looks at claims data to identify members who have had an opioid overdose that resulted in an emergency room visit. From there, specially trained Aetna nurses and social workers reach out to the member with a phone call to offer support –including answering questions, providing education about naloxone or scheduling appointments with local in-network providers for follow-up care.

The program's high level of engagement with members is one of its greatest successes. According to Dan Knecht, MD, vice president of health strategy and innovation at Aetna, between 40-50 percent of calls result in a "meaningful conversation" that aims to understand and address the member's unique needs. "Unfortunately, these folks are trapped in the cycle of addiction. They need and want help, but they often do not have a good sense of how to navigate the healthcare system after they are discharged from the hospital," Knecht notes.

Knecht cites four key factors behind the Guardian Angel program's success to date:

1. **Actionable data insights.** Aetna focused on a known gap in care (i.e., follow-up post-discharge after an opioid overdose) and leveraged analytics to specifically target at-risk members.
2. **Understanding unique circumstances.** "Some members just need education, or a few questions answered, but others need specific services," Knecht says. "It is important to be able to account for those differences and adapt to each unique situation."
3. **The right people doing the right thing.** According to Knecht, "The clinicians making the outbound calls need to be extremely knowledgeable; you can't have someone who isn't an expert doing this kind of outreach."
4. **Intervening at the right time.** "This program works because we are reaching out and offering support at a key moment in these people's lives," Knecht says.

Key Takeaways

- Patients are beginning to expect – and appreciate – outreach related to opioids, just like they expect someone to explain their treatment plan.
- Don't just focus on education about opioids, but also *pain* and *pain management*.
- Look at leveraging existing education and outreach tools from your core EHR vendor – even those originally designed for a different chronic condition.
- Create the right foundation (like a registry) to enable targeted opioid education and outreach to a defined population of patients.
- Don't be afraid to repeat the same information. Multiple *types* of education across multiple *mediums* can help reinforce key messages and points.
- In addition to patient-specific education, include a message on *all* discharge summaries about opioid risks and proper disposal, as it might apply to the patient or family.
- Learn from others' experience. This includes:
 - Proactive communication with your EHR vendor to see how other clients are leveraging built-in capabilities to address opioid education and patient outreach.
 - Seek out presentations, webinars, etc., from other provider organizations – especially those that are using the same core EHR vendor(s) that you are.
 - Be active in vendor user group conferences, websites, etc.

Resources

Listed here are examples of credible sources of reliable patient educational content:

- [National Center of Biotechnology Information](#)
- [Turning the Tide: For Patients](#) – a website with education material for patients by former U.S. Surgeon General Vivek Murthy, MD
- The [U.S. Food and Drug Administration](#) website provides information on opioids. a consumer's [Guide to Safe Use of Pain Medication](#), as well as a [List of Questions](#) patients should ask their provider. [Safe disposal instructions](#) can also be found on the website.
- [Lock Your Meds Campaign](#) is an opioid safety campaign including educational focus on adult awareness prescription medications storage and safety.
- [What Patients Should Ask Prescribers Before Taking Opioids](#) is a good educational tool for patients.
- The [FDA](#) has guidance on [Disposal of Unused Medications](#) including [Drug Enforcement Administration-Authorized Take Back Programs](#), and how to dispose of medication.

Chapter 8: Community Outreach and Collaboration

Background

The opioid crisis spans many different areas of care and response. It affects EDs, ORs, neonatal ICUs, police, fire, EMT, family practice, behavioral health, dental, Federally Qualified Health Centers (FQHCs), pharmacies, schools, libraries, homeless shelters and most of all, families.

Hospitals and health systems across the United States have begun to realize the effect of the opioid crisis and its immensity. Although great strides are taking place in organizations to reduce opioid prescriptions and help with treatments of opioid addiction, they are learning that they cannot do it alone. We all need to collaborate and work with each other, and at times with some untraditional partners, to be successful in stemming the tide against the crisis.

Reaching out to the communities we serve. building relationships and collaborating with other entities and organizations are vital to success. There can be many different reasons or objectives for collaborating with other entities and organizations spanning regions or within local areas. There are many resources at the national, state and local levels available to help fight the opioid crisis. Single entities and organizations will have a much larger impact in their communities by leveraging and working with other resources in their area.

In some instances, though, resources or programs just don't exist. To fill the gap, people may need to look outside the box and join forces to create frameworks or programs. In order to do that they need to locate and align themselves with people and organizations they may not have had contact with before.

Some examples of collaboration and community outreach include working with FQHCs to design or leverage an existing Suboxone treatment plan. Hospitals can reach out to local health services to place resources strategically in the most effective areas. There are opportunities to work with police departments on strategies dealing with overdoses and treatment options, or with school systems to proactively educate children and parents about the dangers of opioids and prescriptions. Working with pain management practitioners within local and regional areas may lead help identify new standards and alternative treatments.

This chapter will look at different types of collaborations among different organizations and entities. Where possible. we will highlight the role of IT in facilitating these collaborative endeavors.

- Lily's Place Neonatal Abstinence Syndrome Center in West Virginia.
- The Emerald Jenny Foundation
- PROACT
- North Sonoma County Opiate Harm Reduction Task Force

Real World Example

Lily's Place

In October of 2014, Sara Muncy and Rhonda Edmunds, two nurses in the Cabell Huntington Hospital in West Virginia, joined forces with volunteer Mary Calhoun-Brown to address the increasing number of babies born with drug exposure. The state has the highest rate of neonatal abstinence syndrome (NAS) in the nation, with 33 NAS births per 1,000 babies, according to Stephen Patrick, MD, a physician and professor of pediatrics at Vanderbilt University.

NAS babies have much different responses and requirements for their recovery and wellbeing. Edmunds and Muncy visited Pediatric Interim Care Center in Kent, Wash., and learned techniques that would provide better therapeutic care to the drug-exposed babies at the hospital. When they returned, they implemented a comprehensive program directed specifically at treating the NAS babies within their system.

Lily's Place, located in Huntington, is the first neonatal abstinence syndrome center to open in the U.S. Lily's Place provides a continuum of care to any NAS baby born in West Virginia, from medical services to social work. This holistic approach means they can care for infants going through the withdrawal processes while simultaneously helping families deal with the special circumstances that surround having a NAS baby. The center has specially trained nurses, social workers and patient care assistants. Doctors from Valley Health oversee the medical treatment of the babies, and volunteers ranging from college students to grandparents' rock babies, do laundry, clean and perform odd jobs around the building.

[CHIME members interviewed Lily's Place management for this chapter. Below are their answers to our questions:](#)

Q: Can you describe the governance and membership of the collaboration? (e.g., participants, oversight, subgroups, responsibilities, etc.)?

(Membership includes) the West Virginia Department of Health and Human Resources, the West Virginia State Legislature and the West Virginia Legislature Women's Caucus. We had to break through a lot of traditional structures, rules and bureaucratic regulations because no place like this existed the way we felt would be best for babies.

Q: Did you have challenges gaining buy-in from all of the stakeholders? If so, how did you overcome those challenges?

We did have challenges from hospitals, West Virginia Department of Health and Human Resources and Medicaid, all thinking we could not provide safe care for babies outside the hospital. There was concern how to license us. ... behavior health, nursing care facility or create a separate license. Each came with hurdles and hoops and extended our time of opening a facility for years. – we overcame by education and many meetings to finally get buy-in from all parties.

Q: Did your effort have a charter, vision or mission that you could share with us?

At Lily's Place, our mission is to provide medical care to infants suffering from neonatal abstinence syndrome and offer non-judgmental support, education and counseling services to families and caregivers.

"Many mothers need long-term care and counseling to balance the harm of trauma and drug addiction," said Executive Director Rebecca Crowder in an interview with the *West Virginia Executive*. "The services provided by Lily's place do not end when infants graduate from our program."

Providing for the babies means providing support and education for their parents – or, in certain cases, their foster parents, adoptive parents, grandparents, or other family members. Custody decisions are made by West Virginia's child protective services. Crowder said one of her goals for the future is to expand the center's support services to include full-time recovery coaches and substance abuse counselors. Eventually, she said, she'd like Lily's Place to house an intensive outpatient program for mothers who want recovery but are afraid of losing their children.

Support for Lily's place comes from the communities, schools, businesses and other organizations throughout the tri-state region. Even the building itself was a gift from the community – and "nothing short of a miracle," Edmunds said.

While there are no plans for expansion into other counties in the Mountain State, others have contacted Crowder about replicating the Lily's Place model. A guide is available for a fee at <https://www.lilysplace.org/replication-plan>. More information about Lily's Place is available at www.lilysplace.org.

Real World Example

The Emerald Jenny Foundation

"As a parent, I would tend to focus on the behavior." So, begins an interview Bill Ayars did with *Smart Business*, talking about his approach for dealing with daughter Jennifer Emerald Ayars' addiction struggles. Jennifer lost her life after an overdose in 2016 at the age of 28. Her father then realized that he never fully understood that addiction was a disease.

In memory of Jennifer, he and his family founded a non-profit to help others find resources that might be suitable for their situation. The Emerald Jenny Foundation is a 501(c)(3) free searchable database for rehabilitation and treatment facilities, healthcare providers, counselors and other organizations in Ohio dealing with drug and alcohol addiction.

They started by researching treatment providers in Northeast Ohio and contacting them in January of 2017 to verify information to provide on the website. The website went live on May 14 – Jennifer's birthday – with 14 counties in Northeast Ohio. In July, they decided to expand, following the research and verification process used earlier with contacts throughout the state. In October of 2017 the entire state was covered, and by January of 2018 the Ohio Department of Mental Health had replaced its online addiction locator with the Emerald Jenny Foundation website.

Emeraldjennyfoundation.org offers an easy and efficient process to search for treatment facilities. Searches can be refined to include criteria such as age, gender and more. Visitors can view facility profile pages with contact information. The foundation collaborated with their website developer, who helped them to launch the website in a short time, build out statewide content and develop a social media strategy.

CHIME members talked with Director of Operations Susan Tary for this chapter. Below are her answers to our questions:

Q.: What is the most important factor in successfully collaborating with multiple organizations?

First, dedication to the mission. We all felt this was an extremely important cause. We were keenly aware of the fact that people were dying every day. Every number was a person to us. We wanted to relieve some of the suffering that Ohio families were experiencing. We still feel that same desire to alleviate at least the problem of not knowing where to begin the search for help. Second, communication; we began by keeping each other in touch with our progress, and that continues to be how we operate.

Q.: Please describe IT's role in the collaboration or any tools or products that were used to help with the collaboration.

We worked very closely with the website developer, having regular meetings to ensure everything went as planned and on schedule. Fortunately, the website developer took our mission as THEIR mission. They did some research on their own, becoming knowledgeable about the crisis and they pushed as hard as we did in getting the website up and running on time (an amazing four months after we began), as well as expanding it when we decided to cover the entire state, and helping us define our social media strategy.

Real World Example

PROACT

PROACT, or the Provider Response Organization for Addiction Care and Treatment, is a community collaborative established in Huntington, W. Va., to fill gaps in care for people with substance abuse disorder (SUD). PROACT partnered in 2009 with Valley Health to offer medication-assisted treatment to the region. Over the decade, numerous complementary programs (including Lily's Place, detailed earlier) formed to address aspects of the opioid crisis. Realizing the need for a comprehensive approach, healthcare organizations collaborated to address SUD's clinical, behavioral and spiritual issues. Cabell Huntington Hospital, Marshall Health and St. Mary's Medical Center became PROACT's founding partners in April 2018 and Thomas Health System and Valley Health came on board after that.

PROACT offers the following services to treat substance use disorder and help individuals achieve long-term recovery:

- Clinical assessments
- Medication-assisted treatment
- Peer recovery supports
- Individual and group therapy
- Career placement and career readiness training
- Spiritual care
- On-site pharmacy

Today Proact serves as a centralized resource for SUD treatment, recovery, therapy, education, research and support. PROACT unveiled its first facility in Huntington in October 2018 in a renovated CVS Pharmacy. Its reach includes the Charleston-Huntington region and other parts of the state using telemedicine capabilities. It is seen as a model that can be adapted to meet the needs of other communities.

CHIME members interviewed PROACT Director Michael Haney for this chapter. Below are his answers to our questions:

Q.: When did you start your engagement with collaborating with other agencies, organizations or departments?

The different partners involved in PROACT began discussing the project in 2017. Marshall Health, Cabell Huntington Hospital and St. Mary's Medical Center were the initial partners and they formed the original board and filed for incorporation in February 2018. Valley Health and Thomas Health were involved in discussions shortly thereafter but were not made official members of the PROACT Board until just prior to the opening of the Huntington PROACT location.

Q: Please describe IT's role in the collaboration or any tools or products that were used to help with the collaboration?

IT played an incredibly important role in the creation of PROACT and continues to play one today. One of the more challenging parts of this collaboration has been the integration of two separate clinics into one site. PROACT is occupied by both Marshall Health and Valley Health, existing side-by-side, sharing staff and resources. That said, however, both entities maintain separate electronic health records that don't interface with each other, necessitating scanning in order to incorporate documents from one service into the records of the other. Also, as PROACT exists off-site from their respective servers housing both EHRs, communicating with the servers has been an issue.

The original concept of PROACT called for the majority of the billing to be done through Valley Health and so it was their equipment that we decided to utilize. Unfortunately, after installation problems became apparent as Valley utilizes a "thin client" system, which makes it difficult to interact with Marshall systems as we essentially use an app to communicate with another app in order to gain access to Marshall's EHR. It also causes a restriction to even such simple resources as Microsoft Office. IT has played an important role in helping us navigate these issues as electronic communication is the norm now rather than a luxury.

Q.: Did you have challenges gaining buy-in from all of the stakeholders? If so, how did you overcome those challenges?

The really incredible thing about this process was how cooperative and excited all the stakeholders were from the beginning. The only challenges have come from simply defining the scope of work for each of the partners involved and how the partnership would be structured.

Real World Example

Northern Sonoma County Harm Reduction Task Force

In June 2018, Terry Leach, health policy and innovation consultant with the American Association of University Women, started to reach out to organizations in northern Sonoma County to build a North Sonoma County Harm Reduction Task Force. The initial request went to the Healdsburg Police Department, Healdsburg School District, Public Health Department and local providers Dave Anderson, MD, and Walter Maack, MD.

The objective of the collation was to raise awareness of the opioid crisis in Northern Sonoma County and prevent opioid drug overdose deaths. As the collation started to take shape, Walter Maack and his wife Bretta emerged as the face of the cause. In 2017, the Maacks tragically lost their son Morgan, 37, to an accidental heroin overdose.

The task force started meeting to go over the basic tenets of a successful advocacy program. Members needed to come together and focus on the initiatives and plan of action. In order to succeed, each area needed to designate a champion. These champions could then go back to their respective organizations and lead a subcommittee to address the issues and objectives of the Harm Reduction Coalition.

Local statistics were provided by the police department and local health agencies. Although the crisis had not truly taken a foothold in the area, there were signs of growing problems. The local police had reported that overdoses were on the rise and that it would be prudent if the officers started to carry Narcan to treat overdosed individuals if the police were the first to arrive on the scene.

As the coalition was built and gained momentum, some additional organizations and entities started coming on board and implementing mitigation strategies. An example would be that local middle schools started talking about adding prevention curriculum. Local police departments initiated programs that would allow their patrol officers to administer Narcan on the scene to unconscious drug overdose victims.

Healdsburg City Police and Healdsburg District Hospital collaborated to provide fentanyl test strips in their lobbies to help addicts identify possible deadly fentanyl levels. Both organizations announced that the strips would be provided with no questions asked.

The committee struggled to locate physicians in the area who were willing to prescribe Suboxone to help patients to end their addictions. Through solicitations and networking, several providers and clinics were identified that would start prescribing Saboxone.

Leach proposed to establish and conduct a community-wide forum to raise awareness of the problem and identify resources available to the community. A date was selected in October of 2018 to have a community engagement and education session at a local community theater. Champions were asked to provide topics and materials that would support the event and educate the community about the ongoing crisis.

As a first outreach effort to the community, an article was published by the local Healdsburg Tribune to highlight the extent of the opioid crises and inform the community about the public event that was scheduled in October at the community theater.

The format of the event started to take shape. The event would have video introductions that would have the Maacks describe their loss and the impact the crisis has had on their lives. After the videos a panel consisting of the Maacks and Gary Pace, MD, a local provider, discussed the crisis and contributing factors that caused it. The session concluded with a community Q&A with members of the panel.

Demonstration tables were put together by Healdsburg District Hospital and Alliance Medical Center. Volunteers at the tables demonstrated how to use the fentanyl test strips and how to apply the Narcan spray in case of an overdose.

The event was well attended and many of the audience members were directly affected by the crisis. The community questions were emotional and raw. There were levels of frustration within the community on the factors that had brought them to this point in the crisis. Panel members engaged and shared their expertise and experiences. The question session ended with an emotional community member sharing that she had lost her son to the epidemic and pleading with audience members to do whatever they needed to do to prevent it from happening to their loved ones.

The North Sonoma County Harm Reduction Task Force is moving into 2019 with new goals and plans to hold more events and engage with more organizations to fight the epidemic. Some of the goals for this year are:

- Soliciting throughout the county to try and get more providers Medication Administration Certified (MAT) certified.
- Make an effort to pull in resources and contacts that can connect and communicate with the homeless communities.
- Help with Bright Heart Health to collect data from across multiple agencies.
- Reach out to the County Sheriff's Office to try and provide information to the jail systems on treatment requirements.
- Coordinate another community event that might include more topics such as raising awareness, providing information about resources available to people addicted, more demonstrations on test strips and Narcan administration.

Sources:

Lily's Place

<https://www.lilysplace.org/>

<https://www.circa.com/story/2018/07/20/nation/lilys-place-was-the-first>

<http://www.wvexecutive.com/lilys-place/>

<https://people.com/human-interest/lilys-place-west-virginia-clinic-nurses-newborns-opioid-withdrawal/>

<https://www.huntingtonquarterly.com/articles/issue96/nothing-short-of-a-miracle.php>

Emerald Jenny Foundation

<https://www.emeraldjennyfoundation.org/>

https://www.cleveland.com/metro/2017/12/emerald_jenny_foundation_creat.html

<https://www.crainscleveland.com/section/toc/weeks-issue-november-27-2017>

PROACT

<https://proactwv.com/>

https://www.herald-dispatch.com/news/addiction-treatment-hub-coming-to-city/article_cd051bfe-0ef8-5909-9499-0526700b44b8.html

North Sonoma County Harm Reduction Coalition

http://www.sonomawest.com/cloverdale_reveille/news/confronting-the-opioid-epidemic-in-sonoma-county/article_9c91179c-cc03-11e8-8494-6fc031dac114.html

http://www.sonomawest.com/the_healdsburg_tribune/news/task-force-formed-to-battle-opioid-addiction/article_4d43c00c-bc60-11e8-8aae-fbf05c013061.html

http://mobile.raventheater.org/event.php?event_id=948



CHIME Opioid Task Force - PDMP Strategy Survey

The College of Healthcare Information Management Executives (CHIME) Opioid Task Force is developing a playbook to assist our membership in addressing the substance abuse crisis. Keys to every provider's strategies are reducing opioid prescribing for pain management, employing alternative forms of pain management and facilitating patients' addiction recovery efforts.

Chapter 6 of the playbook focus is identifying at-risk patients through access to the Prescription Drug Monitoring Programs (PDMP) used by most states. The chapter includes information on how the key electronic prescribing solution vendors are approaching access to PDMP's from their EPCS solution and assessment of patients' risk to abuse and addiction.

CHIME asked the numerous EHR Vendors to share their strategies. The following firms were able to complete the survey and their responses follow;

- Allscripts
- Cerner
- Dr. First
- EPIC
- MEDITECH
- Next Gen

Allscripts - PDMP Strategy Survey

What is your overall strategy responding to the opioid crisis (in addition to PDMP integration)?

Allscripts has developed and communicated, both internally and externally, an overall approach that brings to bear our resources to address the Opioid Epidemic. In short, these tools are focused on four areas:

- EPCS to help fight fraud and abuse
- PDMP Integration to provide seamless and transparent retrieval of patient data
- Informed Decisions through alerts, scores, and dashboards (analytics)
- Clinical Guidelines and Tools

This article provides an overall summary of Allscripts' public commitment:

<https://www.healthcareitnews.com/blog/how-technology-can-help-fight-against-opeioids>

What is your overall approach to PDMP integration?

Point-to-point or hub-and-spoke?

Hub-and-spoke: Allscripts has integrated with various PDMP aggregators and state PDMPs to enable one-click access to a patient's PDMP data within the EHR workflow. We continue to work on expanding our functionality in this area, as the market is evolving quickly, including requirements from the state regulators.

Where in workflow? EPCS or Other – for example: all encounters vs EPCS only

All Encounters. Allscripts has taken a unique approach wherein the PDMP data is requested and retrieved for every patient encounter (not just when a controlled substance is being prescribed and not just on demand) so that providers will have this important data available at all times. In that way, providers will be alerted to potential problems even when the patient is presenting for routine or other visits that might not normally prompt a prescription for a controlled substance.

What are your plans and progress in interoperability with state PDMPs?

Allscripts has entered into relationships with various partners and states to provide PDMP integration across all states. Where it is allowed, Allscripts will be deploying functionality at a future date to increase integration of the data from PDMPs into our EHRs.

Allscripts - PDMP Strategy Survey

What is your interoperability with Appriss?

- Do you offer / resell NarxCare?
 - √ Allscripts has a relationship with Appriss that provides access to all their supported states (currently at 48). Allscripts has worked very closely with Appriss to implement a unique technology approach to enable rapid retrieval and response with data.

- Do you offer any alternate risk models and analytics availability? If so, please describe.
 - √ Native development and/or 3rd party vendors (e.g. PastRx)

 - √ Not at this time. Allscripts does enable providers to easily link to state PDMPs that provide this level of analytics, and we are in the process of developing native analytics capabilities.

- Do you link directly to PDMP?
 - √ Whether Appriss or other vendors, we link from within our EHRs to the PDMPs. Allscripts also displays a PDMP-sourced report that is presented to the provider within the EHR workflow.

- Data import from PDMP?
 - √ Our ability to import data is affected by state laws and regulations, given that a large number of states prohibit such data consumption by the EHR. Where it is allowed, Allscripts will be deploying functionality at a future date to increase integration of the data from PDMPs into our EHRs.

Do you have interoperability with alternate PDMP solutions? Have you developed integrations with;

- State portal(s)
- RxCheck/PDMP Assist
- Logicoy
- HIE as link to Appriss or others.
- Other
 - √ Yes. Answers above speak to Allscripts' interoperability with each of these vendors or vendor types.

Allscripts - PDMP Strategy Survey

If you can, please share any specific client case studies – include 2-3 representative client examples

- √ Allscripts is seeking the appropriate permissions from clients so that we may share such information. We will do so when they are available.

Optional: If you are able, please share the economic model in provision of these services to your provider clients.

- √ As part of its commitments to provide relevant IT solutions that are responsive to the critical Opioid crisis, Allscripts has chosen not to charge clients any additional fees related to PDMP. All related PDMP functionality is included with a client's EPCS subscription.

Cerner Corporation - PDMP Strategy Survey

Overall strategy responding to the opioid crisis (in addition to PDMP integration)

Facing the complex, global opioid crisis, Cerner Corporation has a holistic strategy to support patients, practitioners and health systems in the mission *to prevent and manage opioid use disorder*. Though the industry has previously emphasized reducing opioid over-prescribing and access to prescription drug monitoring programs (PDMP) as keys to managing the opioid crisis, Cerner coach health systems on balancing the *Three Pillars of Opioid Management*:

- √ **Opioid Safety** – Tenaciously identify and mitigate risks of opioid use while utilizing evidence-based opioid prescribing practices
- √ **Pain Management** – Maintain excellence in pain management, support chronic pain populations with proactive connection with the right providers and services to manage their underlying disorders, and address variance in pain management
- √ **Opioid Use Disorder** – Tenaciously maximize patient engagement at every state in the Cascade of Care for opioid use disorder, and support care teams and providers with the training and resources they need to be successful in helping individuals manage their opioid use disorder

Achieving excellence in opioid management requires a strategic approach each of the Three Pillars with a focus on how the people, processes, and technologies support each other in a common mission. Though much focus has been given in the industry on “don’t do” clinical decision support, such as alerts to prevent prescribing of opioids beyond a certain number of days’ supply, Cerner Corporation is working with health systems and their providers to use technology to truly *support* clinical decision making.

For example, the Cerner Opioid Toolkit includes a collection of CDS to help providers identify person-specific risks prior to prescribing an opioid. It even includes analytical tools that go beyond prescribing rates to determine where opioid treatment agreements and proactive naloxone education can be used more effectively to mitigate patient risk. The opioid crisis is obviously complex, and while many providers feel a sense of duty to help, most are in want of resources that can help. A very simple place to start is to help providers know where a patient can go for treatment of their substance use disorder.

SAMHSA offers a free online treatment locator; which Cerner has integrated into EHR workflow using Cerner MPages technology so that providers can see up-to-date locations of different types of providers based on the patient’s preferred zip code for service.

Cerner Corporation - PDMP Strategy Survey

Though these provide a few examples of specific technologies supporting providers, it is important for health systems to not “throw the kitchen sink” at the problem of opioid misuse. No two states or health systems experience the opioid use disorder epidemic the same way. There are disparities in access to care for populations, differences in the prevalence of fentanyl in illicit sources of opioids, state strategies and community engagement. In 2018, Cerner created the Opioid Management Value Advisory to work in partnership with its clients, taking a data-driven, value-based approach to the opioid crisis. The methodology yields a sustainable process of continuous improvement in both preventing and managing opioid-related harm.

Overall approach to PDMP integration

- Point to point, hub and spoke
 - √ No different than any other EHR – current options are limited. Cerner is connected to Appriss who connects to PMPi. Cerner currently support connecting to both WA and IL PDMPs which is a point to point connection.
- Where in workflow?
 - √ General workflow integration. Workflows in Cerner can be configured linearly and can be contextual to Role, Venue, and specialty. PDMP integration can be placed/ ordered right before or after the home medication list is reviewed and reconciled.
 - √ EPCS

Other – for example: all encounters vs EPCS only

- √ Practitioner access to prescription drug monitoring programs is ideally part of EHR workflows to bolster utilization of the PDMP. When left to tediously access the PDMP via a state web portal, many a practitioner has confessed that they “look the patient up in the PDMP only if they look like a junkie”. This leads to under-identification of individuals engaging in opioid misuse since, for example, individuals with a substance use disorder may not have an appearance or demeanor that matches the practitioner’s conception and may, in fact, appear and be a high-functioning individual. The utility of PDMPs to the practitioner and the patient are improved by including PDMP access easily within common EHR workflows for providers who prescribe or manage opioid medicines.

At a minimum, providers of primary care, pain medicine and emergency medicine should have access to PDMP data accessible prior to medication order entry and/or in relation to their medication reconciliation workflow. State law(s) and opioid prescribing guidelines should be consulted for additional guidance.

Cerner Corporation - PDMP Strategy Survey

Plans and progress in interoperability with state PDMP's

State-specific successes and challenges

- √ Cerner is working to connect all state and territory PDMP to allow for integration of the PDMP report inside clinical and prescriber workflows. Cerner was the first to connect EHRT to the Appriss API and first to have a Provider organization realize the benefits of workflow integration. Due to connection to Appriss, Cerner supports most states that support Appriss integration. Cerner also currently supports workflow integration of 2 states that do not support Appriss – WA and IL. Currently Cerner is working to connect to CA and other states that do not support Appriss integration. This has been a challenge due to lack of standards (API specifications and content format that is delivered).

Interoperability with Appriss.

- Formal agreement? Describe.
 - √ Yes, Cerner Resales Appriss connectivity however recognizes no margin.
- NarxCare resale?
 - √ Yes, same as above.
- Alternate risk model and analytics availability? Describe.
 - √ Native development and/or 3rd party eg PastRx
 - √ The component that launches the Appriss report is native Cerner Developed and supported. Appriss delivers HTML which is not modified merely launched in a window for clinical user to review.
- Direct link to PDMP? Describe.
 - √ Connected to Appriss API. Also connect to WA API offered by OneHealthPort and IL via API supported by Logicoy
- Data import from PDMP? Describe.
 - √ No, data from Appriss API is HTML and not delivered in discrete format like XCPDP. Report level saving is also not offered. Very few states allow saving of report so have not invested in capability although newer Appriss spec can deliver an alternative format that is more conducive to saving to EHRT.

Cerner Corporation - PDMP Strategy Survey

Interoperability with alternate PDMP solutions

- Custom integration with state portal(s)
 - √ WA through OneHealthPort.
- RxCheck/PDMP Assist
 - √ No
- Logicoy –
 - √ Yes, in IL
- HIE as link to Appriss or others.
- Other

Client case studies – include 2-3 representative client examples

- √ Atrium Health reduced prescribing rates for opioids and benzodiazepines after the implementation of EHR-based clinical decision support to identify person-specific risks of use.
- √ Cook County
- √ Intermountain Health Care reduced opioid prescribing rates by about 40% (compared to 2016 rate) through a combined effort of provider collaboration, implementing an opioid stewardship committee, and EHR-based clinical decision support.

Optional: Economic model in provision of these services to the provider client

Dr First - PDMP Strategy Survey

Overall strategy responding to the opioid crisis (in addition to PDMP integration)

- MME Equivalent
- Alerts customizable by enterprise, such as the 6-6-5 alert.
- Bench marking dashboards

Overall approach to PDMP integration

- Point to point, hub and spoke
 - √ Both
- Where in workflow?
 - √ At point of e-prescribing
 - √ Available at any point in encounter

Plans and progress in interoperability with state PDMP's

- State-specific successes and challenges
 - √ Integrated with APRISS
 - √ In Nebraska we are the state PDMP
 - √ Also, have direct connect with some states

Interoperability with Appriss.

- Formal agreement?
 - √ As they bring up a state we integrate
- NarxCare resale?
 - √ Not Clear on this question. We integrate with Narxcare but are not a reseller.
- Alternate risk model and analytics availability? Describe.
 - √ Native development
- Direct link to PDMP? Describe.
 - √ In all e-prescribing apps there are numerous integration points. By clicking PDMP is displayed and prescriber is given credit with the state for checking.
- Data import from PDMP? Describe.
 - √ In states that allow data will become part of the medhx.

Interoperability with alternate PDMP solutions

- Custom integration with state portal(s)
 - √ yes
- RxCheck/PDMP Assist
- Logicoy
- HIE as link to Appriss or others.
 - √ Yes, already integrated with a number of HIEs
- Other

EPIC - PDMP Strategy Survey

Overall strategy responding to the opioid crisis (in addition to PDMP integration)

- √ Epic established a Company Wide Initiative to prioritize software development across applications to help our customers address the opioid epidemic. Some of the functionality from this CW include PDMP integration, morphine equivalency calculations, and decision support at prescribing to account for quantity, duration, and morphine equivalence. A registry was developed for reporting on quality metrics. A predictive model to assess risk of opioid abuse is in development.
- √ We created an opioid safety taskforce that includes representatives from R&D, technical services, and other roles to help ensure customers understand and use the opioid-related enhancements. This group serves as evangelists to assist with adoption of existing opioid-related functionality and workflows, and as a point of contact for new development requests. This group identifies Epic customer success stories to share with others in the Epic community.
- √ Epic provides venues for our customers to collaborate and share their opioid-related initiatives and learn about our plans for development. This includes frequent webinars with customers to communicate our development progress and for customers to share their outcomes. We have a focus group for opioid safety at our annual Users' Group Meeting, as well as a dedicated forum on our intranet, the UserWeb, for customers to share ideas regarding opioid management.

Overall approach to PDMP integration (Point to point, hub and spoke? Where in workflow?)

- √ EPCS, Other – for example: all encounters vs EPCSonly
- √ Epic customers connect to the PDMP using single sign-on (SSO) to pass user and patient credentials to the PDMP portal or using an NCPDP interface. Epic is PDMP vendor neutral, which means that we can integrate with a different states' PDMPs, regardless of which technology they use (3rd party, HIE, home grown, etc.).
- √ The user can query the PDMP at any time in a patient encounter, not just during order entry. Epic customers report that this process takes only seconds. The query can happen automatically prior to the MD seeing the patient, if state rules allow. Decision support at the point of order entry can be used to remind the prescriber to check the PDMP if they have not done so already.
- √ Epic will track whether the prescriber checked the PDMP.

EPIC - PDMP Strategy Survey

Plans and progress in interoperability with state PDMPs

- √ Our goal is for all Epic community members to integrate with the PDMP as their state allows, typically NCPDP interface, SSO, or both. As state PDMPs are interconnected, they will often also provide prescription dispense information from other states, depending on their regulations.
- √ We recommend industry standard integration for more complete adoption. If a state is considering a non-industry standard method of PDMP integration, we will provide feedback on the benefits on using an industry standard method.

Interoperability with PDMP Vendors.

- √ Epic is vendor neutral. The state determines how a healthcare system's EHR will integrate with their PDMP database. This could be direct integration with the PDMP, or via a 3rd party such as Appriss, Logicoy, or NIC. Regardless of the method of integration chosen by the state, Epic customers can integrate with the PDMP using the industry standard NCPDP interface or SSO integration methods.
- √ Epic does not resell NarxCare or similar 3rd party products. Instead, Epic customers can purchase those products directly from the 3rd party as needed.

Client case studies – include 2-3 representative client examples

- √ In 2018, there were 6 HIMSS Davies Award winners that presented an opioid-related use case. Five of those 6 HIMSS Davies Award winners use Epic. The presentations are available here: <https://www.himssconference.org/education/best-practices-opioids-symposium>

The organizations are:

- **Ochsner Health Systems:** Leveraging EHR for Opioid Stewardship
- **Duke:** Perioperative Care, Enhanced Recovery After Surgery and Reducing Opioid Dependency
- **Bon Secours Mercy Health:** Leveraging Analytics to Change Opioid Prescribing Behavior
- **Rush University:** Standardizing Opioid and Drug Abuse Referrals to Rehabilitation
- **Sparrow Hospital:** Anticipating and Preventing ADEs: Decreasing the Need to Rescue Hospitalized Patients from Opioid-related Complications

EPIC - PDMP Strategy Survey

Several Epic organizations have demonstrated at least 50% reduction in opioid prescribing:

- [Geisinger](#)
- Anne Arundel Medical Center
- [Yale New Haven Health System](#)

- MetroHealth
 - Project DAWN (Deaths Avoided with Naloxone) is a program that provides naloxone kits to those at high risk of overdose. MetroHealth reports over 1,200 lives saved with Project DAWN.
 - They've also [reduced opioid prescriptions by over 33%](#) over the course of 18 months. They attribute some of their success to PDMP integration with Epic, opioid abuse screening questionnaires in Epic, and reports in Epic for monitoring provider prescribing habits.
 -
- [Henry Ford Health System integrates with Michigan's PDMP](#). When clinicians order a schedule II-V drug, the system automatically queries the Michigan Automated Prescription System at the same time to see previous opioid prescriptions the patient

MEDITECH - PDMP Strategy Survey

Overall strategy responding to the opioid crisis (in addition to PDMP integration)

MEDITECH is committed to providing our customers - all of whom are healthcare organizations - with tools that support their efforts in reducing opioid-related harm. With this vision in mind, MEDITECH has launched an Opioid Stewardship Toolkit, providing both evidence-based and experience-based tools and optimal workflows which align with the 12 CDC recommendations for prescribing opioids as it pertains to chronic pain management. These tools, along with optimal workflow recommendations include:

- In-workflow access to Prescription Drug Monitoring Programs
- Collaborative solution for Electronic Prescribing of Controlled Substances
- Embedded opioid risk tool
- Chart review tools for longitudinal tracking
- Streamlined order sets to guide appropriate therapies
- Templates for tracking the patient's opioid use and outcomes in the physician's note
- Patient registries to identify patients and monitor compliance
- Patient education provided in departure packet and accessible via patient portal
- Opioid treatment agreements accessible via patient portal
- Outcomes monitoring (including opioid prescribing patterns) available in MEDITECH's Business and Clinical Analytics solution

Overall approach to PDMP integration

Point to point, hub and spoke

MEDITECH is addressing physician concern over laborious reporting of controlled substances by integrating direct, one-tap access to the Prescription Drug Monitoring Program (PDMP), directly within MEDITECH Expanse. Leveraging our relationship with DrFirst for PDMP integration, MEDITECH created an integrated PDMP link, accessible to prescribers throughout their EHR navigation to provide on-demand access to a patient's-controlled substance history.

MEDITECH - PDMP Strategy Survey

Where in workflow? EPCS, Other – for example: all encounters vs EPCS only

Providers using MEDITECH and DrFirst are able to immediately access a patient's PDMP report throughout their chart review and e-Prescribing workflow. MEDITECH has created an integrated PDMP link, available in the chart and patient reference region of MEDITECH Expanse. Providing multiple access points, such as in the reference region, allows prescribers the ability to access the PDMP wherever the prescriber navigates within the patient's chart. The PDMP link can be accessed from the patient's chart whether on an active visit or not. Prescribers have expanded views of a patient's-controlled substance history with a multiple-state PDMP view as allowed by cooperating states, within the EHR prior to transmitting prescriptions. The immediate access removes the need to link separately to multiple PDMP's and is crucial for improving workflow and clinical decision making, and safely managing patient drug use.

Plans and progress in interoperability with state PDMP's

State-specific successes and challenges

- √ The goal of MEDITECH and DrFirst's PDMP collaboration is to provide a PDMP solution for all states, regardless of data source, regardless of the changing regulatory landscape, with the same seamless interface for the user. To accomplish this, DrFirst has created a data source-agnostic platform that is seamlessly integrated into MEDITECH Expanse. MEDITECH and DrFirst currently have available integration with 35 states and growing, to obtain PDMP data from both Appriss and non-Appriss data sources. Recent connectivity to California CURES 2.0 PDMP represents a key success as this was a new program run specifically by the state with a new infrastructure.
- √ The constantly changing PDMP landscape involving differing requirements, formats, and jurisdictions remains the most difficult challenge to overcome. DrFirst maintains an assertive regulatory outreach program and development process with the ultimate goal of nation-wide PDMP data coverage.

Interoperability with Appriss.

Formal agreement? Describe. NarxCare resale?

- √ DrFirst has a long-standing and valued relationship with Appriss and provides data from all of their supported states to MEDITECH Expanse. DrFirst continues to work closely with Appriss to expand the availability of data and to refine the registration and provisioning processes necessary to connect clinical users nationwide. DrFirst is in the late stages of securing an agreement to provide NarxCare and expect to have it available shortly.

MEDITECH - PDMP Strategy Survey

Alternate risk model and analytics availability? Describe.

Native development and/or 3rd party eg PastRx

- √ Utilizing PDMP data to perform analytics and provide clinical decision support would be of high value. At this time, states which provide discrete PDMP medication data and allow long-term storage and analytics to be performed on that data are extremely limited. MEDITECH and DrFirst continue to weigh in and provide input on the changing regulatory landscape in order to support such valuable tools in the future.

Direct link to PDMP? Describe.

- √ Our MEDITECH/DrFirst connection to Appriss supports the ability to receive an HTML report pre-formatted by Appriss which is presented for display within MEDITECH Expanse.

Data import from PDMP? Describe.

- √ Our MEDITECH/DrFirst connection to non-Appriss states such as California, Illinois, and Maryland support the ability to receive discrete PDMP medication data. We request and display the data upon demand within the prescriber workflow, but do not store it long-term in MEDITECH Expanse due to state requirements.

Interoperability with alternate PDMP solutions

- √ As stated above, MEDITECH and DrFirst's goal is to provide a PDMP solution that is supplier-agnostic, easy-to-access, and seamlessly integrated. DrFirst has designed their solution to scale and adapt as state, federal, and other initiatives continue to evolve. Their multi-data source architecture already accommodates state data sources that do not work with Appriss. DrFirst maintains custom integrations to state platforms and will continue to support and grow these as the market dictates.

MEDITECH - PDMP Strategy Survey

Custom integration with state portal(s)

- √ DrFirst has direct, state-specific connections in California and Maryland and is actively working with other states. These PDMP connections are therefore accessible in MEDITECH Expanse.

RxCheck/PDMP Assist –

- √ MEDITECH and DrFirst are interested in connecting to additional data sources in pursuit of our goal to obtain nationwide coverage, but no official agreements to report at this time.
 - Logicoy -
MEDITECH via DrFirst is connected to Logicoy in Illinois.
 - HIE as link to Appriss or others.
 - Other
MEDITECH has been speaking to Collective Medical about their ED notifications which incorporate state PDMP data.

Client case studies – include 2-3 representative client examples

We will note 3 key client examples here:

- The first MEDITECH customer to go live with in-workflow, one-click PDMP integration was War Memorial Hospital in Sault Ste Marie, Michigan, in June 2018. Prescribers at War Memorial are accessing PDMP data from both ambulatory and acute care settings. See published success story: <https://blog.meditech.com/integrated-prescription-drug-monitoring-supports-smarter-opioid-prescribing>
- The first MEDITECH Expanse customer to go live with the Illinois PDMP (which uses Logicoy) was Swedish Covenant Hospital in Chicago, Illinois.
- Salinas Valley Memorial Hospital (in Salinas Valley, California) is currently testing the new connection to CURES 2.0 in California. Dr. Kasting from Salinas Valley was a major proponent of this initiative and is actively involved in testing. See published article: <https://www.drfirst.com/news/drfirst-launches-californias-first-ever-integrated-technology-to-tackle-the-opioid-epidemic-across-the-healthcare-continuum/>

MEDITECH - PDMP Strategy Survey

All of our physician users have noted a significant time savings when accessing PDMP data from within their workflow in MEDITECH Expanse as opposed to logging into and searching the state PDMP web sites manually. We are working with our clients to collect metrics to further validate.

Optional: Economic model in provision of these services to the provider client

- √ MEDITECH does not charge for PDMP integration. DrFirst fees vary from state to state as the state data charges vary.

NextGen - PDMP Strategy Survey

Overall strategy responding to the opioid crisis (in addition to PDMP integration)

- √ NextGen NGCare enables us to manage populations of patients that are considered high risks for opioid abuse.
- √ New behavioral health content enables provider to appropriately screen patients that are high risk for Opioid abuse.
- √ Internal task force commissioned within NextGen to establish a strategy and communication plan to address the crisis.

Overall approach to PDMP integration

- Point to point, hub and spoke
 - √ NextGen Enterprise (NGE) EHR supports point-to-point connections from EHR to Appriss. In the coming Spring 2019, we will be offering a proxy server between EHR and Appriss which will handle two-way SSL.
- Where in workflow?
EPCS
 - √ NGE EHR offers an automatic report retrieval before a user sends a controlled substance.
- Other – for example: all encounters vs EPCS only
 - √ NGE EHR offers ad-hoc PDMP reports available for any user with proper credentials.

Plans and progress in interoperability with state PDMP's

State-specific successes and challenges

- √ Due to scalability, NextGen's focus has been on establishing a centralized connectivity to various state registries through Appriss. We do have some direct points of connectivity with various state registries who are not connected thru Appriss. Those connections can often be complex since many states have established their own proprietary methods of connectivity, so these connections are established on a case-by-case bases and may come at a higher cost to the client.

NextGen - PDMP Strategy Survey

Interoperability with Appriss.

- Formal agreement?
 - √ NGE has integration with Appriss. Clients pay Appriss directly for licenses.
- NarxCare resale?
 - √ Appriss sales NarxCare directly to NGE clients as a value-added-service.
- Alternate risk model and analytics availability? Describe.
 - √ Native development and/or 3rd party eg PastRx
- Direct link to PDMP? None
- Data import from PDMP? None

Interoperability with alternate PDMP solutions

- Custom integration with state portal(s)
 - √ None
- RxCheck/PDMP Assist
 - √ None
- Logicoy
 - √ State-specific solutions are available for NGE EHR clients residing in states where Logicoy has contract with the state to offer access to the PDMP.
- HIE as link to Appriss or others.
- Other

Client case studies – include 2-3 representative client examples

- √ At this time, NextGen has not conducted case studies on PDMP connectivity.

Optional: Economic model in provision of these services to the provider client

- √ NextGen does not require clients to license or pay for additional services to integrate with the standard connectivity thru Appriss, however, clients may be subjected to licensing charges directly by the state PMP.