Producing Better Data to Help Combat Opioid Dependence

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Healthcare organizations are just beginning to leverage data analytics to take on a variety of emerging urgent topics related to managing population health. According to the National Institute on Drug Abuse, fentanyl, heroin, opioids, and a variety of synthetic drugs killed more than 50,000 Americans in 2016. As substance abuse runs rampant in the US, healthcare organizations are quickly recognizing that they need more electronic resources to tackle this growing problem.

Interoperable systems and trained data analysts are also needed to assist in managing the opioid crisis. Health information management (HIM) professionals, with their expertise in data collection, dissemination, and analysis, play a growing role in helping healthcare organizations manage opioid data.

Like other types of healthcare data, opioid data is found in a variety of source systems, such as electronic health records (EHRs), paper records, and electronic prescribing systems. In the case of illicit drug use—a recognized issue in opioid dependence—it may come in the form of self-reported data from individual users. Because of this, many challenges exist in finding ways to accurately and consistently collect, analyze, and report opioid dependence data. The rationale for tracking and reporting this information is increasingly compelling as well.

The US Department of Health and Human Services (HHS) has launched a comprehensive strategy to empower local communities to address the crisis. The opioid epidemic is one of HHS's top priorities. In 2017, HHS launched a five-point opioid strategy with the following pillars:

1. Better addiction prevention, treatment, and recovery services
2. Better data on the epidemic
3. Better pain management
4. Better targeting of overdose-reversing drugs
5. Better research on pain and addiction

Prescription Drug Monitoring Programs and Opioid Data Collection

Pharmacies dispensing controlled substances, including opioid prescriptions, are required by regulations to capture and share dispensed controlled substance data with their state's Prescription Drug Monitoring Programs (PDMP). PDMPs are state-run electronic data repositories of dispensed prescription data. The first PDMP was formed in 1939 in California for law enforcement, but it took decades for states to establish standard electronic methods for collecting and giving providers access to dispensed opioid data. The type of PDMP data collected can be dependent on the state's program, including:

- Patient's name and address
- Type of drug dispensed
- Quantity of drug dispensed
- Number of days a given quantity is supposed to last
- Date dispensed
- Prescriber and pharmacy identifiers

PDMPs do not collect data on race, ethnicity, physician specialty, diagnosis, or medical conditions, and some PDMPs collect data on payers. Others collect data on dispensing location, such as the Veterans Health Administration, Indian Health Services, community pharmacies, hospitals, and clinics.

Government agencies, EHRs, pharmacy management systems, and others have worked to help standardize the way PDMP information electronically moves around. Part of the problem is some of the PDMP database platforms are built on old

technology and don't have funds to update their systems. There is no standard way of accessing PDMP data across states. The National Council for Prescription Drug Programs (NCPDP) has written guidance on ways to help standardize the sharing of PDMP data.

Obtaining access to dispensed-opioid data within PDMPs varies from state to state. Each state's PDPM regulations are different and operate independently. This is the reason there is no national dispensed opioid data available. State law determines access to PDMP information. All PDMPs allow, and some states require, prescribers and pharmacists to review PDMP information on patients under their care, especially when prescribing or dispensing opioid prescriptions. Many PDMPs provide this opioid data to other stakeholders (i.e., law enforcement, medical licensing boards, and state Medicaid programs). Some PDMPs release de-identified data for research and prevention purposes.

PDMPs are a rich source of opioid prescription data that can be used for a variety of purposes. Practitioners can use PDMP data to prevent opioid prescription misuse. Prescribers and pharmacists can use PDMP data to identify patients at risk for opioid misuse by geographic location, tracking excessive dispensed-opioid quantities, and identifying patients engaged in doctor or pharmacy shopping. Researchers and government agencies can use de-identified data to assist with population health efforts to help solve the opioid crisis.

Working Together to Support Opioid Abuse Prevention

While neither health IT nor HIM can solve the opioid crisis alone, both can support initiatives to reduce the number of opioid prescriptions and improve provider education. Addressing prescription opioid abuse requires a multifaceted, holistic effort that includes encouraging effective non-opioid therapies for pain management.

Health informatics can support pharmacies by identifying inconsistencies and diversion from normal prescription patterns. In addition, analytics can be used to monitor and predict opioid abuse by understanding utilization of opioids and the provider's prescribing patterns.

Geisinger Health System, for example, started an initiative that was focused on adequate use of non-opioid therapies to combat the side effects of opioids for pain management and to reduce the potential risk of opioid addiction. Their initiative was focused on changing physician practice patterns to reduce the prescribing of opioids by using the data from the EHR system and the statewide PDMPs to develop a provider dashboard that was linked to the EHR. This dashboard shows the providers when their patients receive different opioid prescriptions from different providers, and if they are dispensed at different pharmacies. Providers were educated on best practices for pain management and how important it is to make a note in the patient's EHR regarding what they are prescribed. For pain management post-surgery, the use of non-addictive alternatives to opioids for managing pain, such as Tylenol, nonsteroidal anti-inflammatory drugs, or other novel medications were recommended. For chronic pain patients, rehabilitation, exercise, cognitive behavior therapy, yoga, and acupuncture were recommended as it was determined that opioids are not helpful in treating chronic pain, and that side effects of chronic opioid therapy include risk of addiction and depression and other potential health problems.

The EHR system is a key element in a successful initiative to combat opioid abuse. For hospital and provider networks that utilize the same EHR system, receiving updated and complete information on the patient's health history seems easy. The challenge starts when the patient sees out-of-network providers who either use a different EHR or are still in the process of adopting an EHR system for the practice.

Alternative Solutions for Opioid Data Collection

While data is collected in EHRs and PDMPs, simply collecting it is not enough. Currently, every state except Missouri has a PDMP that collects and shares data about the prescription and distribution of opioids, although mandates regarding PDMPs vary from state to state.[1] Only 37 states legally mandate prescribers to query the PDMP before prescribing opioids.[2] In addition, the frequency of data reporting varies among states. Forty-two states require data reporting within 24 hours or one business day. Some states take as long as seven business days to report.[3] And every state does not require prescribers and pharmacists to register with the PDMP. In 2017, only 34 states required prescribers to register with the PDMP, and only 25 states required pharmacists to register with the PDMP.[4] To improve opioid data collection, prescribers should be mandated to register with the PDMP and query the PDMP before prescribing opioids, and data must be collected in a timely manner.

Ideally, PDMPs should be integrated into EHRs to give providers insight regarding a patient's prescription history. There has been a recent push for a nationwide PDMP that would incorporate federal and state databases in order to give providers information that would assist in clinical decision-making. The American Pharmacists Association has reported that it supports pharmacists being involved in the development of uniform standards for an integrated nationwide PDMP and supports mandatory PDMP enrollment by all healthcare providers.[5]

Until a nationwide PDMP is implemented, interstate data sharing is a viable solution. Over 40 states now participate in interstate data sharing to allow them to share and access prescription data from other states in an effort to combat prescription drug abuse with neighboring states.[6] At the local level, another possible alternative is to build a data sharing system for each county. In order to combat the opioid epidemic, providers need access to data. The more access they have, the greater the likelihood of success.

Notes

1. Thielking, Megan. "Missouri is the only state not monitoring prescription drug use. Will it finally create a database?" STAT. March 7, 2017. www.statnews.com/2017/03/07/missouri-prescription-drug-database/.
2. National Alliance for Model State Drug Laws. "Mandated Registration with PMPs—MAP." June 30, 2017. www.namsdl.org/Maps/Mandated%20Registration%20with%20PMPs%20-%20State%20Map%207-24-17.pdf.
3. National Alliance for Model State Drug Laws. "Frequency of Prescription Drug Monitoring Program (PMP) Data Reporting—Map." January 2018. www.namsdl.org/Maps/Frequency%20of%20PMP%20Data%20Reporting%20Map%201-2-18%20(Update).pdf.
4. National Alliance for Model State Drug Laws. "Mandated Use of Prescription Drug Monitoring Programs (PMPs)—Maps." January 2, 2018. www.namsdl.org/Maps/Mandated%20Use%20%20of%20PMPs%20-%20State%20Map%20(1-2-18).pdf.
5. American Pharmacists Association. "2014-2015 APhA Policy Committee Report: Integrated Nationwide Prescription Drug Monitoring Program." www.pharmacist.com/sites/default/files/files/Prescription%20Drug%20Monitoring%20Programs.pdf.
6. National Association of Boards of Pharmacy. "Over Forty States are Now Members of PMP InterConnect." May 18, 2016. https://nabp.pharmacy/over-forty-states-are-now-members-of-pmp-interconnect/.

References

American Academy of Family Physicians. "Chronic Pain Management and Opioid Misuse: A Public Health Concern (Position Paper)." July 2012. www.aafp.org/about/policies/all/pain-management-opioid.html.

Anderson, Daren et al. "Using Health Information Technology to Improve Adherence to Opioid Prescribing Guidelines in Primary Care." *The Clinical Journal of Pain* 31, no. 6 (June 2015): 573–579. http://doi.org/10.1097/AJP.0000000000000177.

Drug Enforcement Administration, Diversion Control Division. "State Prescription Drug Monitoring Programs, Questions and Answers." June 2016. www.deadiversion.usdoj.gov/faq/rx_monitor.htm#1.

Manchenton, Molly. "Arming Doctors and Pharmacists with Data, the U.S. Takes on a Drug Epidemic." MITRE Corp. March 2013. www.mitre.org/publications/project-stories/arming-doctors-and-pharmacists-with-data-the-us-takes-on-a-drug-epidemic.

National Council of Prescription Drug Programs. "NCPDP Recommendations for Dose Accumulation Monitoring in the Inpatient Setting: Acetaminophen case model, version 1.0." *American Journal of Health-System Pharmacy* 73, no. 15 (August 2016): 1,144-1,165. www.ajhp.org/content/73/15/1144.

Substance Abuse and Mental Health Services Administration's Center for the Application of Prevention Technologies. "Using Prescription Drug Monitoring Program Data to Support Prevention Planning." www.samhsa.gov/capt/sites/default/files/resources/pdmp-overview.pdf.

Volkow, Nora D. and A. Thomas McClellan. "Opioid Abuse in Chronic Pain – Misconceptions and Mitigation Strategies." *New England Journal of Medicine* 374 (March 31, 2016): 1,253-1,263. www.nejm.org/doi/full/10.1056/nejmra1507771.

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