FROM DATA TO HEALTH: RESPONSIBLY LEVERAGING MICHIGAN'S AUTOMATED PRESCRIPTION SYSTEM

OPEN
Prevention. Treatment. Recovery.

POLICY BRIEF - MAY 2025

Data from MAPS offer valuable insights into opioid and other controlled substance prescribing and help improve patient health, clinical care, and research. These insights can be uniquely identified through secure connections with other health information. Analyses of the combined data sources can uncover nuanced patterns and specific opportunities to improve prevention efforts and patient outcomes in Michigan.

MICHIGAN AUTOMATED PRESCRIPTION SYSTEM (MAPS)

MAPS is Michigan's prescription drug monitoring program, tracking the prescription of controlled substances* within the state through an electronic database (1). Prescription data is electronically reported by pharmacies to MAPS. Registered practitioners can review the controlled substances that have been dispensed to an individual (2). Administered by the Licensing and Regulatory Affairs (LARA), MAPS was updated in 2017 as part of the state's strategy to combat the opioid overdose epidemic. The State of Michigan currently supports secure MAPS integration with existing electronic medical record (EMR) systems.

THE ROLE OF MAPS DATA IN RESEARCH

MAPS data can be used to identify statewide trends in controlled substance prescribing, analyze differences in appropriate controlled substance prescribing by demographics or geographical area, and monitor changes in state policy and their impact on prescribing of controlled substances. The data from MAPS can also be used for research to help determine, more efficiently and effectively, specific interventions and delivery of appropriate resources to communities addressing overdose deaths.

ENSURING DATA SAFETY AND SECURITY

Assuring that patient information remains safe and secure would be an integral aspect of MAPS research data management. This can be achieved through establishing an honest broker system that enables secure linking and sharing of clinical and research data. This process maintains privacy and confidentiality of individuals' information while allowing researchers to access the data needed to conduct approved research projects. An honest broker system can also provide oversight to ensure that data sharing complies with legal and ethical standards and that the privacy of individuals is properly protected.

17 states currently permit or are developing policies for the use of an honest broker system to link PDMP data to other sources of health data for research (3).

USING SECURELY LINKED MAPS DATA, WE CAN ADDRESS THESE AREAS:

ENSURING ADEQUATE PAIN MANAGEMENT

Older persons usually consume less opioids after surgery, but MAPS data helped to identify that vulnerable Michigan patients with frailty have higher needs for opioids after surgery (4).

REDUCING INAPPROPRIATE LONG-TERM OPIOID USE

MAPS data was used to pinpoint how patients are at risk of long-term opioid use after surgery because of excess prescribing, not the opioid prescription itself, highlighting the importance of reducing excessive prescriptions (5).

IMPROVING PROVIDER EDUCATION AND PATIENT CARE

While opioid prescribing recommendations can help surgeons reduce excess prescriptions, patients that were exposed to opioids before surgery are often excluded. Using MAPS data, researchers are able to tailor recommendations to better meet the needs of patients who use opioids before surgery (6).

IDENTIFYING GAPS IN CARE

By studying how health outcomes for people on long-term opioid therapy for pain are impacted by insurance status, MAPS data was used to better understand the care provided for Michigan Medicaid patients (7).

MAPS DATA AND HEALTH POLICY

Currently, LARA is supporting efforts to integrate MAPS' comprehensive database of prescribing information with electronic health records (3). Building on this work by establishing a policy that provides a clear and specific method for accessing MAPS data for research can help ensure the ongoing discovery of findings that improve health and wellbeing, while also keeping data safe and secure.

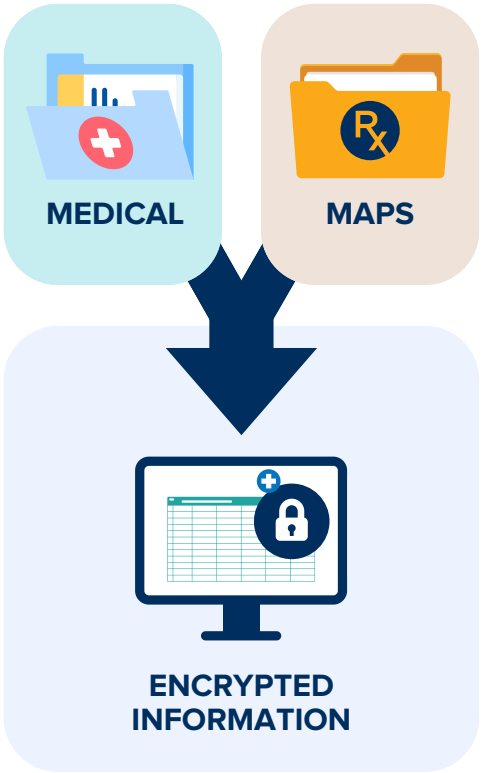
IT IS RECOMMENDED THAT POLICYMAKERS CONSIDER THE FOLLOWING FOR DEVELOPING A POLICY:

DATA ACCESS

- Amend the state's Public Health Code to authorize the Department of Licensing and Regulatory Affairs to release identifiable data with appropriate safety and security measures to approved higher education research institutions for the purposes of research, policy, educational and/or patient quality improvement initiatives.

DATA SAFETY AND SECURITY

- Require a data sharing agreement outlining the security protocols, standards for data encryption, maintenance of the data, reporting requirements, and other procedures to reduce the potential risks from a data breach (7).
- Include an honest broker system to securely receive and link MAPS identifiable data with other patient and research data.
- Establish security protocols and processes for researchers to access and use the MAPS data once received by the higher education research institution for the purposes of research and/or quality improvement initiatives.
- Ensure research publications or reports written will not include any patient or prescriber identifiers.



*Controlled substances are drugs regulated under federal law based on their potential for abuse or addiction. Controlled substances tracked by MAPS (schedules 2 - 5) have an accepted medical use, such as opioids, stimulants, depressants, hallucinogens, and anabolic steroids.

REFERENCES

1. Michigan Compiled Laws - Section 333.7333a: Electronic monitoring system; definitions. https://legislature.mi.gov/Laws/MCL?objectName=MCL-333-7333A.
2. MI Administrative Code(s) for Licensing and Regulatory Affairs - Bureau of Professional Licensing - Board of Pharmacy Administrative Rule 338.3162b. https://ars.apps.lara.state.mi.us/AdminCode/DeptBureauAdminCodeDepartment=Licensing%20and%20Regulatory%20Affairs&Bureau=Bureau%20of%20Professional%20Licensing.
3. Analysis of Access to Prescription Data Management Programs Data for Research. Lee VA, Compton WM, Pollock JD. DOI: 10.1001/jamanetworkopen.2022.18094.
4. Frailty Status, Not Just Age, is Associated With Postoperative Opioid Consumption: A Retrospective, Population-based Analysis. Latack, Kyle R. MD; Howard, Ryan MD; Bicket, Mark C. MD, PhD; Cooley, Samantha MSW; Gunaseelan, Vidhya MBA, MS, MHA; Englesbe, Michael MD; Waljee, Jennifer MD, MPH, MS. DOI: 10.1097/AS9.0000000000000496
5. Postoperative Opioid Prescribing and New Persistent Opioid Use: The Risk of Excessive Prescribing. Howard R, Brown CS, Lai YL, Gunaseelan V, Brummett CM, Englesbe M, Waljee J, Bicket MC. DOI: 10.1097/SLA.0000000000005392.
6. Association of opioid exposure before surgery with opioid consumption after surgery. Bicket MC, Gunaseelan V, Lagisetty P, Fernandez AC, Bohnert A, Assenmacher E, Sequeira M, Englesbe MJ, Brummett CM, Waljee JF. DOI: 10.1136/rapm-2021-103388
7. High-risk prescribing following surgery among payer types for patients on chronic opioids. Sharif L, Gunaseelan V, Lagisetty P, Bicket M, Waljee J, Englesbe M, Brummett CM. DOI: 10.1097/SLA.0000000000005938.
8. Prescription Drug Monitoring Program Training and Technical Assistance Center. (2023). (rep.). Prescription Drug Monitoring Program Research Requests. Retrieved November 2024, from https://www.pdmpassist.org/pdf/resources/PDMP_Research_Requests_Report_20230224.pdf.

OPEN
Prevention. Treatment. Recovery.

The Overdose Prevention Engagement Network (OPEN) is a diverse team dedicated to improving lives and reducing harms of substance use. By engaging with individuals, communities, and organizations, we share education and resources to strengthen person-centered prevention, treatment, and recovery.