CHRT

ISSUE BRIEF

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Uncoordinated Prescription Opioid Use in Michigan

Prescription opioids such as morphine, oxycodone, and hydrocodone provide pain relief to patients with chronic pain. However, these drugs also pose safety risks to patients. Opioid use can cause respiratory depression, resulting in overdose or death. As prescription opioids have been used more extensively for pain control in the past two decades due to changing practice guidelines, overdose deaths surged in both Michigan and the United States.[1] Notably, the majority of opioid-related disabilities and deaths result from patients taking opioids as prescribed, rather than from deliberate abuse or misuse.[2] Furthermore, opioid-related deaths are frequently associated with concurrent use of prescribed antidepressants or benzodiazepines like Valium and Zanax.[3]

Pain control is an essential part of patient care, and opioids are one of the primary pain treatments available. While most opioids are used and prescribed appropriately, a small number of patients receive numerous prescriptions from separate prescribers within a short period of time. This lack of coordination increases patients' risk of accidental overdose and death. This issue brief analyzes accidental deaths from opioid overdoses in Michigan, uncoordinated opioid prescribing among privately insured Michigan patients in 2013, and policy options to improve safe prescribing in the state.

[1] "Vital Signs: Overdoses of Prescription Opioid Pain Relievers—United States, 1999–2008," *Morbidity and Mortality Weekly Report*, Nov. 4, 2011, 60(43):1487–92: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6043a4.htm (accessed 9/2/15).

[2] L. Manchikanti, S. Helm, B. Fellows, et al., "Opioid Epidemic in the United States," *Pain Physician*, July 2012, 15(3):ES9–38.

[3] C. M. Jones, K. A. Mack, L. J. Paulozzi, "Pharmaceutical Overdose Deaths, United States, 2010," *JAMA*, 2013, 309(7): 657-659: http://jama.jamanetwork.com/article.aspx?articleid=1653518 (accessed 11/4/15).

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Key Findings

- Uncoordinated opioid prescribing is a critical patient safety issue in Michigan, particularly for patients who receive a large volume of opioids from multiple prescribers. It is essential that patients receive appropriate pain control, which may include the use of opioids, but pain treatment should not jeopardize patient safety.
- Accidental overdose deaths involving opioids (including prescription drugs and heroin) increased sixfold in Michigan between 1999 and 2013 (from 81 to 519 deaths). These opioid-related deaths represented 38 percent of all accidental drug deaths in 2013, up from 23 percent in 1999.
- Accidental overdose deaths involving prescription opioids represented 43 percent of total opioid deaths in 2013. The remaining 57 percent of deaths were from heroin, which is noteworthy since some patients first become addicted to prescription drugs and then turn to heroin, the strongest form of opioid.[4]
- In 2013, over 600 privately insured Michigan patients in the study group were defined as having uncoordinated opioid prescriptions (0.3 percent of all patients using prescription opioids). These patients filled at least ten opioid prescriptions from four or more providers within three months. As a result, they ran a higher risk of accidental overdose and death because their providers may not have been aware of all their opioid prescriptions.
- In October 2015, the Michigan Prescription Drug and Opioid Abuse Task Force released its findings and recommendations.[5] Key recommendations to address these issues include:
  - Expanding provider education on safe opioid prescribing;
  - Requiring providers to have a bona-fide relationship with patients before prescribing controlled substances;
  - Launching a public awareness campaign;
  - Increasing access to the lifesaving overdose reversal drug naloxone;
  - Exploring the possibility of limiting criminal penalties for people who report or seek medical attention for overdoses; and
  - Improving the state's database of controlled substance prescriptions and increasing its use by providers and pharmacists.

[4] "How is Heroin Linked to Prescription Drug Use?" National Institute of Drug Abuse website, N.d.: http://www.drugabuse.gov/publications/research-reports/heroin/how-heroin-linked-to-prescription-drug-abuse (accessed 9/8/15).

[5] Michigan Prescription Drug and Opioid Abuse Task Force, *Report of Findings and Recommendations for Action*, October 26, 2015: http://www.michigan.gov/documents/snyder/Presciption_Drug_and_Opioid_Task_Force_Report_504140_7.pdf (accessed11/4/2015).

Pain Treatment Options

Pain control is an essential part of patient care. Prescription opioids can be an effective tool in addressing pain for many patients, but they come with substantial risks, including addiction and accidental overdose and death.[6] The risk of death increases when opioids are taken in combination with other prescription drugs such as antidepresants or benzodiazepines (e.g., Valium, Zanax).[7] Also, some patients experience hyperalgesia, where increasingly higher doses of opioids result in worsening pain.[8] For these reasons, patients and providers can consider a variety of pain treatment options that do not involve opioids, such as:

- Non-opioid analgesic drugs like aspirin, ibuprofen, and acetaminophen;
- Regional anesthetic treatment;
- Surgery;
- Psychological therapies such as cognitive behavioral therapy, biofeedback, and meditation;
- Rehabilitative and physical therapy; and
- Complementary and alternative medicines, including massage and acupuncture.

These therapies can be used alone or in combination to relieve chronic pain. In many cases, patients and providers must test multiple therapies and medication dosages to optimize pain treatment.[9]

In cases where opioids are the most appropriate pain treatment, providers can adopt universal precautions to mitigate the risks of opioid prescribing, including:

- Careful screening for patient risk factors prior to prescribing opioids;
- Effective patient education on safe use, storage, and disposal of opioids;
- Development of individual treatment plans that include periodic reassessment of pain and opioid use as appropriate (e.g., pill counts, urine tests); and
- Use of Prescription Drug Monitoring Programs to monitor patients' full opioid use across all providers.

Universal precautions can help providers reduce the risk to patient safety while appropriately treating patients' pain.[10]

[6] L. Paulozzi, K. Mack, and J. Hockenberry, "Vital Signs: Variation among States in Prescribing of Opioid Pain Relievers and Benzodiazepines—United States, 2012," *Morbidity and Mortality Weekly Report*, Jul. 4, 2014, 63(26): 563–68, http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6326a2.htm (accessed 9/14/15).

[7] N. Qureshi, L. Wesolowicz, C. Liu, et al., "Effectiveness of a Retrospective Drug Utilization Review on Potentially Unsafe Opioid and Central Nervous System Combination Therapy," *Journal of Managed Care & Specialty Pharmacy*, 2015, 21(10): 938-944.

[8] K. Bannister, "Opioid-Induced Hyperalgesia: Where Are We Now?" *Current Opinion in Supportive and Palliative Care*, 2015, 9:116–121.

[9] Institute of Medicine, *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education and Research* (Washington, DC: The National Academy Press, June 29, 2011): http://iom.nationalacademies.org/Reports/2011/Relieving-Pain-in-America-A-Blueprint-for-transforming-Prevention-Care-Education-Research.aspx (accessed 9/25/15).

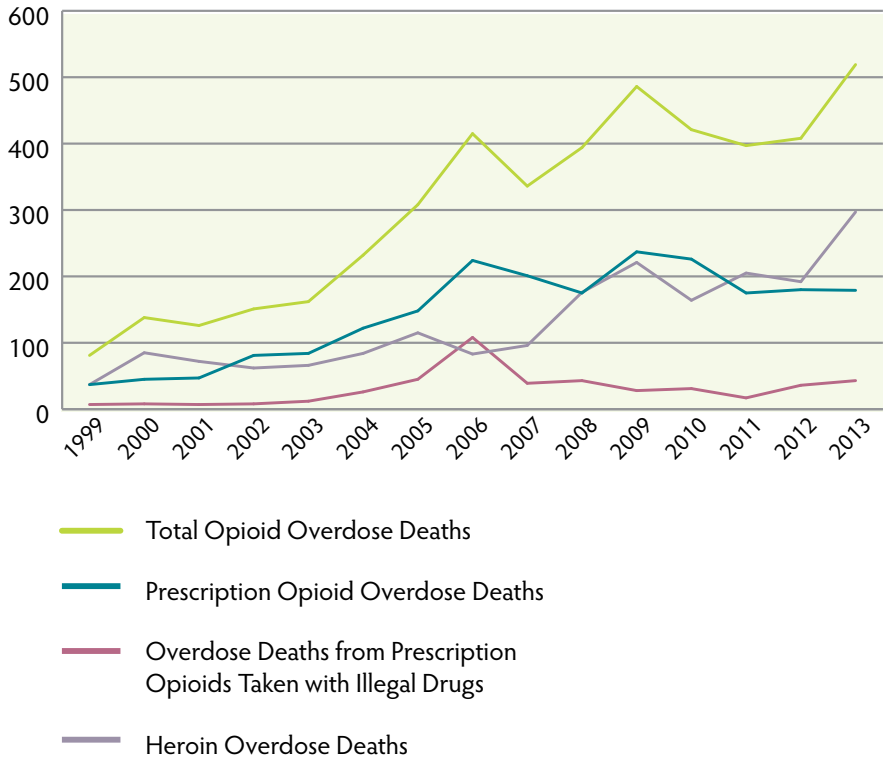
[10] N. Katz, H. Birnbaum, M. Brennan, et al., "Prescription Opioid Abuse: Challenges and Opportunities for Payers," *American Journal of Managed Care*, 2013, 19(4): 295–302.

Accidental Deaths from Opioid Overdoses

Accidental overdose deaths involving opioids—including both prescription drugs and heroin—increased sixfold in Michigan between 1999 and 2013 (81 to 519 deaths). Opioid-related deaths represented 38 percent of all accidental drug deaths in 2013, up from 23 percent in 1999. FIGURE 1

Accidental overdose deaths from prescription opioids alone represented 34 percent of the total accidental opioid deaths in 2013. Another 8 percent of deaths involved prescription opioids taken along with illegal drugs like heroin and cocaine, and 57 percent were from heroin (alone or with cocaine). Heroin use rose as prescription opioid use increased, as some patients become addicted first to prescription opioids and then turn to heroin, the strongest form of opioid.

FIGURE: 1
Accidental Opioid Overdose Deaths in Michigan, 1999–2013



Source: Center for Healthcare Research & Transformation (CHRT) analysis of Michigan Department of Community Health data.[11]

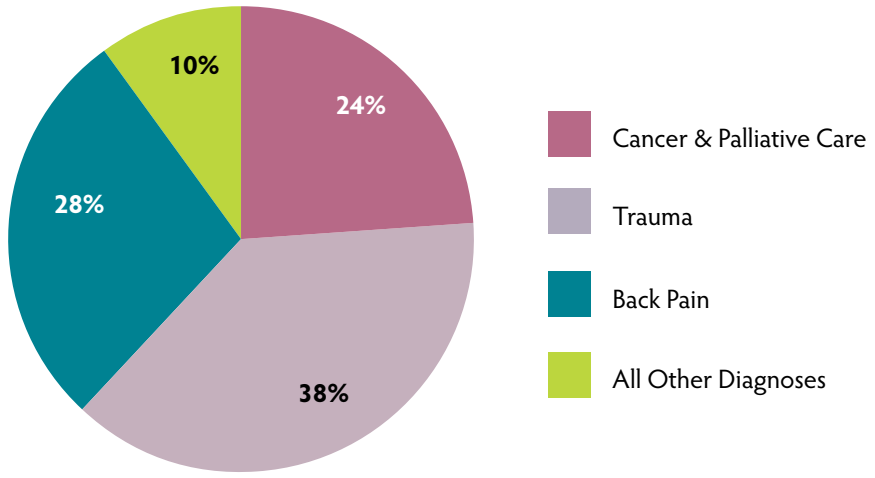
[11] Data was provided by the Michigan Department of Health and Human Services. The overdose death data included deaths classified as accidental or of undetermined intent. Deaths from suicide and homicide were excluded. In Figure 1, total opioid overdose deaths included deaths from both prescription opioids and heroin. Detail was provided on deaths from prescription opioids alone, from heroin (alone or with cocaine), and from prescription opioids taken with illegal drugs such as heroin and cocaine.

Uncoordinated Opioid Prescribing among Privately Insured Patients in Michigan

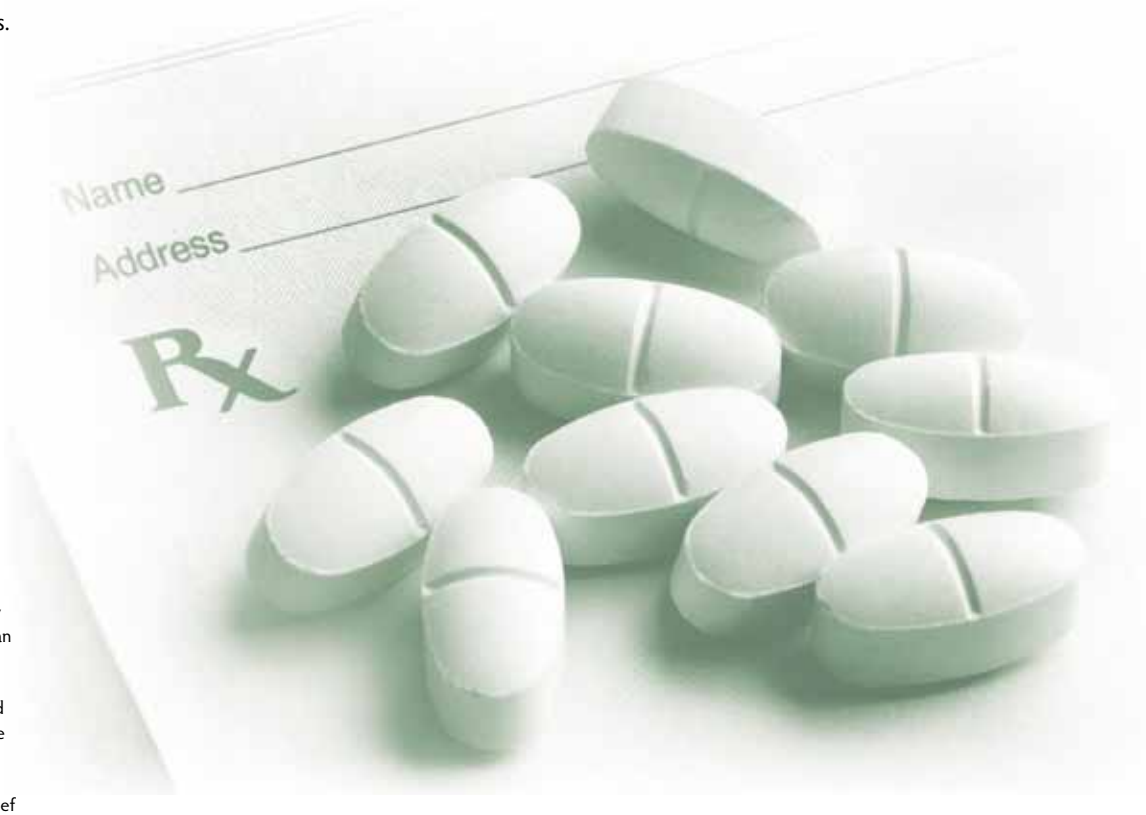
In Michigan, nearly 21 percent of all privately insured patients in the CHRT study group filled at least one opioid prescription in 2013.[12] Over 600 of these patients filled at least ten opioid prescriptions from four or more providers within three months, representing 0.3 percent of all patients using opioids. These patients ran a higher risk of accidental overdose and death, because their providers may not have been aware of all the medications the patient was taking.

Patients with uncoordinated opioid prescriptions were more seriously ill than other patients using opioids. Over 60 percent of patients with uncoordinated opioid prescriptions were diagnosed with cancer, trauma, or palliative care in 2013—complex, painful conditions that may have required care from multiple specialties. FIGURE 2 By comparison, only 34 percent of all patients using opioids had cancer, trauma, or palliative care diagnoses.

FIGURE:2
Patients with Uncoordinated Opioid Prescriptions by Diagnosis, 2013



Source: CHRT analysis of Blue Cross Blue Shield of Michigan (BCBSM) data.



[12] This issue brief used Blue Cross Blue Shield of Michigan (BCBSM) data on commercially insured patients of all ages living in Michigan in 2013. Patients were included if they had both medical and pharmacy coverage and filled at least one prescription for an opioid from a pharmacy. Prescription opioids were identified in the data using the U.S. Drug Enforcement Agency Schedules II to V classifications. The costs reported in this brief included those paid by both BCBSM and by patients' copays and coinsurance.

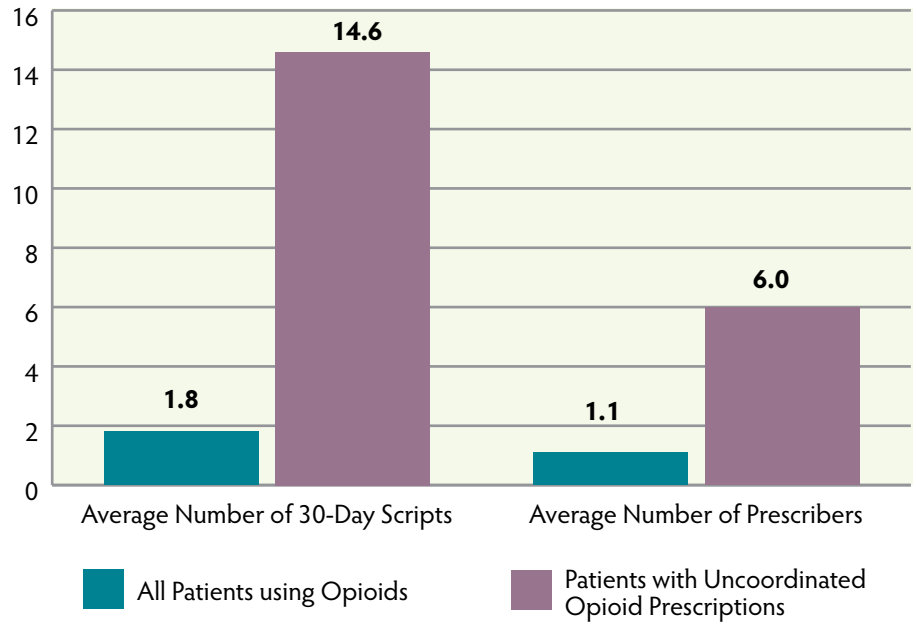
Uncoordinated Opioid Prescribing among Privately Insured Patients in Michigan *(continued)*

Patients with back pain represented 28 percent of total patients with uncoordinated opioid prescriptions. Treatment guidelines do not support long-term opioid use for patients with back pain, and instead call for pain treatments such as non-opioid analgesic drugs, psychological therapies, and complementary and alternative medicine.[13,14] Moreover, research shows that patients with back pain are at higher risk of opioid dependence or abuse than other non-cancer patients on long-term opioid therapy.[15] FIGURE 2 (*See page 5.*)

Patients with uncoordinated opioid use saw an average of six prescribers and received nearly fifteen months' supply of drugs in 2013—more than one pill per day for a year.[16] By comparison, the average patient using opioids received less than two months' supply of opioids from one prescriber. FIGURE 3

FIGURE:3

Prescription Opioid Use and Prescriber Patterns by Patient Population, 2013



Source: CHRT analysis of BCBSM data.

Note: The Figure only includes prescriptions for Schedule II and Schedule III drugs. Schedule IV and V drugs were rarely used by either population.

[13] M. Goertz, D. Thorson, J. Bonsell, et al., *Adult Acute and Subacute Low Back Pain* (Bloomington, MN: Institute for Clinical Systems Improvement, November 2012): https://www.icsi.org/_asset/bjvqrj/LBP.pdf (accessed 10/5/15).

[14] National Collaborating Centre for Primary Care, *Low Back Pain: Early Management of Persistent Non-specific Low Back Pain*, (London, UK: National Institute for Health and Clinical Excellence, May 2009): http://www.ncbi.nlm.nih.gov/pubmed/20704057 (accessed 10/5/15).

[15] M. Edlund, B. Martin, M. Fan, et al., "Risks for Opioid Abuse and Dependence among Recipients of Chronic Opioid Therapy: Results from the TROUP Study," *Drug and Alcohol Dependence*, 2010, 112: 90–98.

[16] Scripts were standardized to 30-day prescriptions.

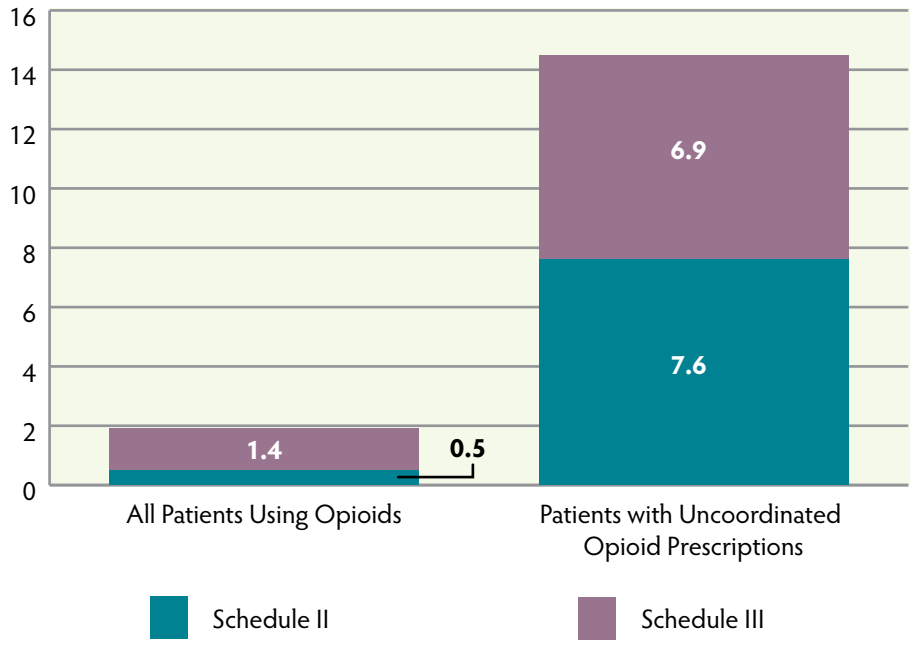
Uncoordinated Opioid Prescribing among Privately Insured Patients in Michigan *(continued)*

Patients with uncoordinated opioid prescriptions also used more potent opioids than the general population using prescribed opioids, likely due to the higher prevalence of serious conditions such as cancer, trauma, and palliative care. The U.S. Drug Enforcement Agency (DEA) classifies opioids as Schedules I to V, which roughly measures the drugs' potency. Schedule I drugs are illegal substances such as heroin with no medically recognized use. Schedule II drugs such as morphine and oxycodone have appropriate medical uses but high abuse potential, and are the most potent and strictly regulated legal opioids. The potency and abuse potential generally drops with higher drug schedules.[17,18.,19]

Patients with uncoordinated opioid prescriptions primarily used Schedule II opioids, although they also used large volumes of Schedule III drugs. The volume and potency of these drugs placed the patients at high risk for accidental overdose and death, which was compounded by the uncoordinated prescribing patterns. In contrast, the general population using prescribed opioids purchased far fewer opioids and principally used Schedule III drugs. Schedule IV or V drugs were rarely used in either population. FIGURE 4

FIGURE:4

Average 30-Day Supply of Prescription Opioids per Patient, by DEA Schedule, 2013



Source: CHRT analysis of BCBSM data.

Note: The Figure only includes prescriptions for Schedule II and Schedule III drugs. Schedule IV and V drugs were rarely used by either population.

[17] For example, prescriptions for Schedule II drugs must be prescribed in writing, cannot be refilled, and are limited to one 30-day script by many insurers. In contrast, Schedule III–V drugs can be prescribed by phone or fax, and can be refilled up to five times within six months.

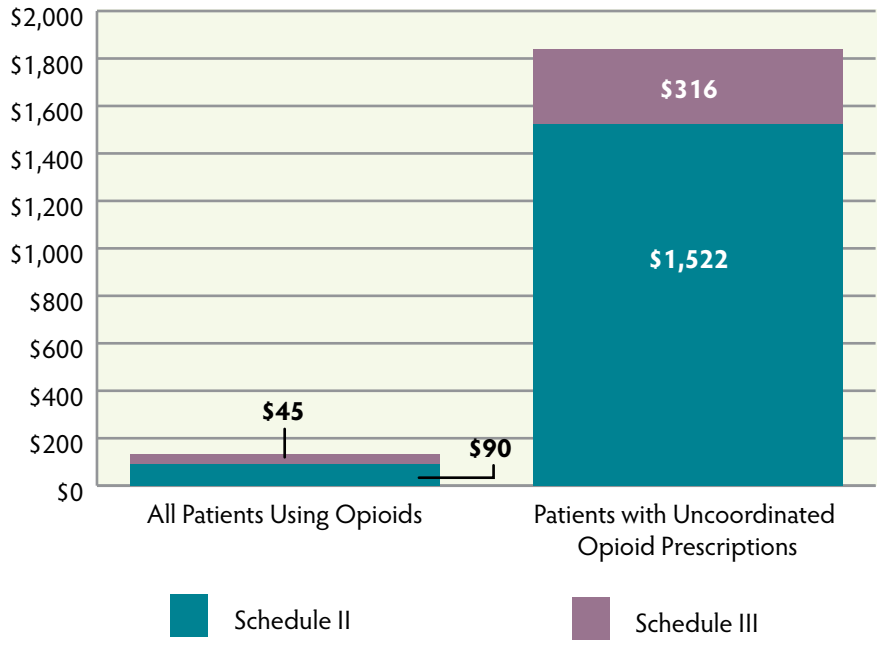
[18] U.S. Department of Justice Drug Enforcement Administration, Office of Diversion Control, "Practitioner's Manual Section V: Valid Prescription Requirements," 2006: http://www.deadiversion.usdoj.gov/pubs/manuals/pract/section5.htm (accessed 9/2/15).

[19] U.S. Department of Justice Drug Enforcement Administration, Office of Diversion Control, *Controlled Substance Schedules*, N.d.: http://www.deadiversion.usdoj.gov/schedules/#define (accessed 9/2/15).

Uncoordinated Opioid Prescribing among Privately Insured Patients in Michigan *(continued)*

Schedule II drugs were substantially more expensive than Schedule III drugs, leading to higher costs for the patients with uncoordinated opioid prescribing who used proportionately more Schedule II drugs: over 80 percent of the $1,838 in opioid spending per patient went to Schedule II drugs. For the general population using prescribed opioids, two-thirds of the total opioid spending was for Schedule II drugs, with total opioid spending at $135. FIGURE 5

FIGURE:5
Prescription Opioid Spending per Patient, by DEA Schedule, 2013



Source: CHRT analysis of BCBSM data.

Note: The Figure only includes prescriptions for Schedule II and Schedule III drugs. Schedule IV and V drugs were rarely used by either population.

Policy Response to Prescription Opioid Trends

Michigan policymakers have prioritized the issue of prescription opioid use in response to the recent increase in accidental deaths. In 2014, Michigan passed two laws to increase access to naloxone, a drug that reverses opioid overdoses, for patients, families, and first responders such as police officers.[20,21] Michigan also expanded coverage for Medicaid under the Affordable Care Act, resulting in increased coverage for substance abuse treatment.[22] In addition, Michigan's Medicaid managed care plans are authorized to have pharmacy lock-in programs that require individuals with uncoordinated prescription opioid use patterns to use a single prescriber or pharmacy.[23] In January 2015, Governor Snyder called for a comprehensive plan to address opioid abuse in the State of the State address, leading to the formation of the Michigan Prescription Drug and Opioid Abuse Task Force in June.[24]

[20] *Liability of Certain Persons for Emergency Care*, 1963 PA 17, MCL 691.1503 (2014). (Revision effective 10/14/14): http://www.legislature.mi.gov/(S(mp0tfow5j3ybszm0q5whjftz))/mileg.aspx?page=getObject&objectName=mcl-691-1503 (accessed 9/2/15).

[21] Public Health Code, 1978 PA 368, MCL 333.17744b. (Revision effective 10/14/14): http://www.legislature.mi.gov/(S(4bwm3etziotcyogxumpdopub))/mileg.aspx?page=getObject&objectName=mcl-333-17744b (accessed 9/2/15).

[22] *Prescription Drug Abuse: Strategies to Stop the Epidemic*, 2013 (Washington, DC: Trust for America's Health, Oct. 2013): http://healthyamericans.org/assets/files/TFAH2013RxDrugAbuseRpt16.pdf (accessed 9/2/15).

[23] *National Summary of State Medicaid Managed Care Programs* (Baltimore, MD: Centers for Medicare and Medicaid Services, July 1, 2012): http://www.medicaid.gov/medicaid-chip-program-information/by-topics/data-and-systems/downloads/medicaid-mc-enrollment-report.pdf (accessed 9/30/15).

[24] "Gov. Rick Snyder Forms Task Force to Address Prescription Drug and Opioid Problems in Michigan," Office of the Governor of Michigan Press Release, June 18, 2015: http://michigan.gov/snyder/0,4668,7-277-57577_57657-357435--,00.html (accessed 9/25/15).

Policy Response to Prescription Opioid Trends *(continued)*

The Task Force released its report of findings and recommendations for action on October 26, 2015.[25] There are several key recommendations that will address issues related to uncoordinated opioid prescribing and patient safety, including:

- Educating providers on safe opioid prescribing and treatment for opioid addictions.
- Requiring providers to have a bona-fide relationship with patients before prescribing controlled substances.
- Developing a public awareness campaign on the dangers of prescription drug abuse and safe medication disposal, with a focus on reducing the stigma of addiction.
- Increasing access to the life-saving overdose reversal drug naloxone through potential changes in dispensing procedures.
- Exploring the possibility of limiting criminal penalties for low-level offenses for those who report an overdose and seek medical assistance, referred to as "Good Samaritan Laws".
- Updating or replacing the Michigan Automated Prescription System (MAPS), an electronic database of all controlled substances dispensed in Michigan. Requiring registration and use of MAPS by prescribers and dispensers of controlled substances.

The Task Force also recommended improving access to substance use treatment, strengthening licensing regulations for health professionals and pain facilities, and reviewing best practices to manage opioid abuse in other states and with local coalitions.

[25] Michigan Prescription Drug and Opioid Abuse Task Force, *Report of Findings and Recommendations for Action*, October 26, 2015: http://www.michigan.gov/documents/snyder/Presciption_Drug_and_Opioid_Task_Force_Report_504140_7.pdf (accessed 11/4/2015).

Conclusion

Uncoordinated opioid prescribing is a critical patient safety issue in Michigan, particularly for patients who receive large amounts of opioids from multiple prescribers. Providers and policymakers can reduce patients' risk of accidental overdose and death and also improve appropriate, coordinated pain management by implementing the recommendations of the State Task Force. While Michigan has developed a variety of strategies to improve patient safety and reduce prescription opioid abuse, additional policy interventions and stakeholder collaboration are needed given the scale of this epidemic.

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