Minnesota's Early Opioid Policy Response

Impact of policies to curtail opioid prescribing

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Executive Summary

In recent years, Minnesota joined many states in passing laws that limit opioid prescribing and require prescribers to check the Prescription Drug Monitoring Program (PDMP) before prescribing opioids. Minnesota's PDMP law was enacted in 2007; on January 1, 2021, prescribers were required to check the PDMP before any initial prescription for Schedule II through IV opioids, and periodically during long-term opioid therapy. Minnesota also limits the number of days for which opioids may be prescribed.

This analysis uses national data to estimate the impact of those laws on the number and strength of opioids prescribed to Medicaid recipients. In the past decade, when many states have enacted these policies, a range of factors led to a decrease in opioid prescribing, but an increase in opioid overdose deaths. This novel analysis compares trends in states that adopted each of the policies to contemporary trends in states that had not yet adopted the policies, controlling for changes in state demographics and other policies that may affect opioid use. We find:

- In states where opioid prescribing laws were implemented, there was a statistically significant reduction in prescribing strength (-119 Morphine Milligram Equivalent per Medicaid recipient after two years) and number of prescriptions (-.13 prescriptions per Medicaid recipient after two years).
- Mandatory PDMP use laws were associated with small, but not statistically significant, declines in the number of prescriptions after three years. This analysis did not have the data necessary to examine other potential PDMP-related outcomes, like changes in either rates of dangerous co-prescribing or changes in illicit behavior by prescribers or patients. Currently, Minnesota statute (§152.126) prohibits the PDMP from sharing the data necessary to evaluate those measures.
- Neither policy was associated with decreases in either prescription-related or illicit opioid-overdoses. States that adopted prescription limit laws actually had faster increases in overall opioid mortality than states that did not, but this appears to be a continuation of trends that began before the states adopted these policies.

This report finds that steps taken by the Minnesota legislature had important, positive impacts on opioid prescribing patterns. These encouraging findings provide empirical support for Minnesota's efforts to limit opioid prescribing. Our exploratory analysis is also suggestive that more stringent requirements for prescribers to check the PDMP, like those Minnesota adopted in 2019, may not result in reductions in opioids prescribing, though additional study is needed. This analysis also provides a comprehensive 50-state scan of the application of these two policies, offering insights into what other states are doing to regulate prescribing (see Appendices A and B).

This report presents mixed findings for the associations between prescription limits and mandated use of PDMPs with changes in opioid poisoning deaths. Neither policy was associated with significantly lower prescription deaths; while overall opioid deaths increased in states that adopted prescribing limits, that appears to be a continuation of trends that began before the laws were adopted. Given this evidence and other research, a robust continuum of care—prevention, early intervention, treatment, and recovery services for opioid use disorder—is necessary to lessen the tremendous harm of opioids.

About the team

MMB's Impact Evaluation unit is a team of data and social scientists that rigorously evaluates state investments and policies to find what works and does not. The legislature established the team in 2019 to assess the impact of the state's response to the opioid epidemic and to study human services grants, broadly. We prioritize working with agencies and partners to identify and answer pressing questions, and creating evidence that is rigorous, relevant, and used by policymakers.

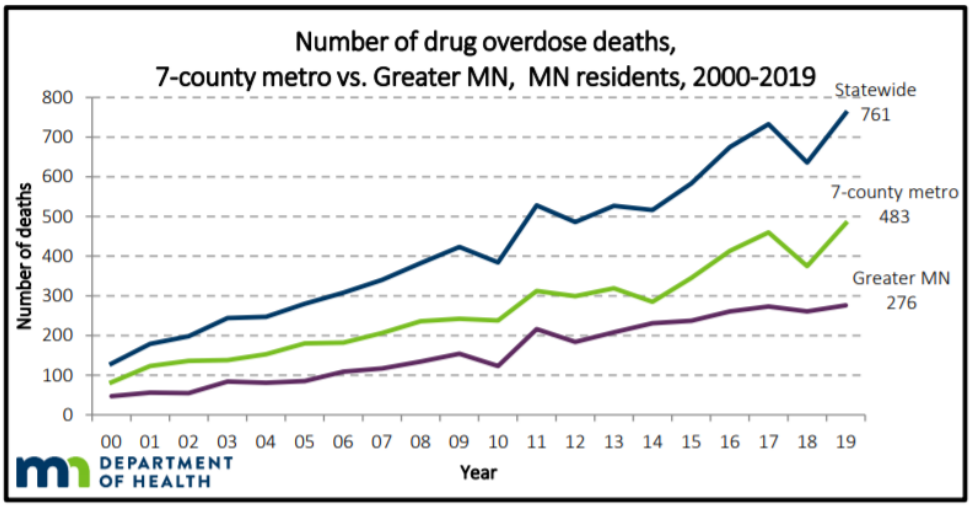
As the first report for this time, this study offers a broad, foundational investigation on the impact of opioid-related policies across the U.S.; future studies will focus specifically on state investments in opioid-harm reduction. For more information or to learn about current and future areas of study, please contact resultsfirstmn@state.mn.us.

Introduction and background

Starting in the late 1990s, the United States saw a steady increase in opioid prescribing for pain relief. This trend reached its peak in 2015, when the opioid prescribing rate reached 81.2 prescriptions per 100 people each year (Guy Jr. et al., 2017). During the same period, opioid-related deaths increased, first slowly and then precipitously. This more rapid increase was associated with a stabilization of prescription opioid deaths and growth in those caused by heroin and fentanyl (Planalp & Hest, 2020). Though the substances changed, the waves are irrevocably linked—with about 80 percent of heroin users starting with prescriptions (Muhuri, Gfroerer, & Davies, 2013).

By 2019, the U.S. hit an all-time high with 63,483 reported opioid-related overdose deaths, or nearly 175 Americans every day. That exceeds deaths from car crashes, kidney disease, or suicide. The resulting toll saw a sustained decrease in American life expectancy for the first time in decades. Minnesota has mirrored this trend with overdoses increasing from 54 in 2000 to 229 in 210 to 761 in 2019. The aggregate growth in mortality masks even more troubling disparities on populations of color and indigenous communities; Black Minnesotans are twice as likely to die from overdose as whites, and American Indians are six times more likely to die.

Figure 1: Number of drug overdose deaths in Minnesota, by region, 2000-2019

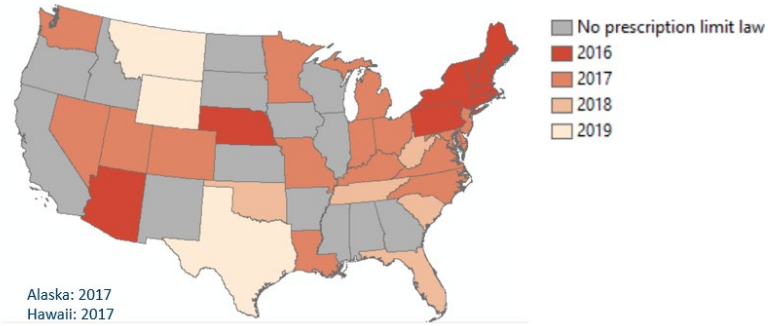


This tragedy prompted policy responses at both the federal and state-levels. The federal response sought to increase access to treatment and recovery services, promote the use of overdose-reversing drugs, strengthen data reporting, and advance alternative pain management practices.

States also implemented a range of policies and programs to address the crisis. These responses have several advantages. First, states are equipped to target responses to address local conditions. Second, state action can increase the salience of an issue to its residents; by prioritizing opioid response, states convey that it is a problem they are taking seriously and encourage local communities to do the same. While state opioid responses span many domains, this report assesses two widely adopted policies:

targeting prescription limits on opioid prescribing and implementing mandatory prescription monitoring drug programs (PDMPs).

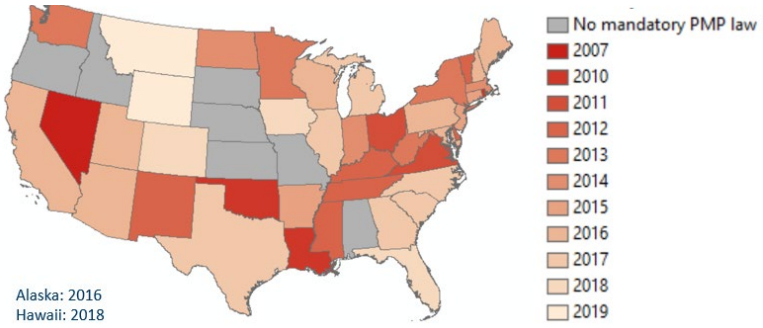
Figure 2: Implementation of prescription limit policies



In 2016 the CDC released guidelines noting that long-term opioid misuse often begins with treating acute pain, and that a three- to seven-day supply is generally enough to treat severe pain (Dowell, Haegerich, & Chou, 2016). Shortly after, Massachusetts became the first state to adopt a seven-day statutory limit on initial opioid prescriptions ("Opioid prescription limits and policies by state," 2019). By October of 2018, 33 states legislated opioid prescribing limits, including limits on all initial prescriptions and limits targeting certain patient types (e.g., prescriptions for dental or ophthalmologic pain) (*Prescribing Policies*, 2019). Appendix A presents a table of opioid prescription limit policies adopted by each state, and the date of their adoption.

PDMPs gather data about patients' prescription history and potential for misuse from prescribers when a prescription is issued. As most PDMPs were established before the severity of the crisis became evident, it was common for states to adjust their laws over time, primarily to expand the situations under which the program must be used. Though research is mixed, studies have shown PDMPs to be associated with reductions in opioid poisoning, healthcare admissions for opioid-related treatment (Reifler et al., 2012), and opioid prescribing (Haffajee, Mello, et al., 2018). Appendix B presents a table of PDMP policies adopted by each state, and the date of their adoption.

Figure 3: Implementation of PDMP policies



Minnesota has adopted each of these approaches to limiting higher-risk opioid prescribing. The legislature enacted legislation establishing Minnesota's PDMP in 2007. Required use of the PDMP has expanded over time, with required quarterly reviews of patients in outpatient treatment programs beginning in 2013, and mandatory review of the PDMP prior to any initial Schedule II through IV opioid, as well as ongoing review of long-term therapy, effective January 1, 2021 (Minnesota Statute § 151.126 Subd. 6).

In addition, Minnesota has placed increasing limits on the prescription of opioids for acute pain, beginning in 2017 with a four-day limit on prescriptions for acute dental or ophthalmic pain. This limit was broadened, and now encompasses a limit of seven days for all Schedule II through IV opioid or

narcotic pain relievers for adults, a five-day limit for children, and a four-day limit for dental pain and refractive eye surgery (Minnesota Statute § 152.11, Subd. 4).

Variation in the timing and type of prescribing limits and PDMP mandates allows us to assess the impact of these policies on opioid prescribing and overdoses. Though a substantial amount of research has been conducted on the causes and consequences of the opioid epidemic, to our knowledge this is the first study which seeks to understand the impact of both prescribing limits and mandatory PDMP use policies as state-level actions to curb the spread of opioid-related harm. We'll discuss the findings of this nationwide analysis and specific implications for policymaking in Minnesota.

Data and Methods

MMB collected publicly available data from a range of sources, including Medicaid State Drug Utilization Data, Opioid poisoning mortality data, and a range of state level demographic and economic characteristics. The analysis period was 2011-2018 for mortality outcomes and 2011-2019 for prescribing outcomes. The team also conducted a scan of 50 states' statutory limits on prescribing and state PDMP mandates (Appendix 1). The analysis includes 38 total states; 12 states that adopted PDMPs prior to 2013 were excluded because we did not have data prior to 2011 and needed at least two years of pre-policy data to verify the parallel trends assumption (for more see the full report).

We use this data to identify the impact of each of these policies by comparing the changes in outcomes for states that passed the policy, to the outcomes of states had not yet passed the policy. In technical terms, this is referred to as an "event study design". This allows us to estimate the average treatment effect of the policy on the outcomes of interest in each year following the passage. As our two policies most likely impact outcomes differently in each year following adoption, this is especially important in identifying more accurate estimations of the causal impact. The ability to accurately estimate the outcomes is dependent on several key assumptions, which we discuss at length in the technical report (available upon request from ResultsFirstMN@state.mn.us).

Results

The following section reports findings from our event study model. In the following figures, the red circle is the average treatment effect for each year and the gray bars represent uncertainty in the estimate, referred to as confidence intervals. When these intervals do not overlap with the horizontal line at zero, we have a statistically significant impact. When they do intersect with zero, the impact could have happened simply due to chance, and we say there was no statistically significant impact of the policy.

Figure 4, chart A examines the impact on the strength of opioids prescribed or Morphine Milligram Equivalent (MME). It finds a statistically significant decrease impact of prescription limits on MME prescribing per Medicaid recipient, while the mandatory PDMP use policy had neither a positive nor negative impact on MMEs. Chart B looks at the change in the number of prescriptions per Medicaid recipient. Mandatory PDMP use laws show a decrease in the average prescribing to Medicaid participants, but the decrease is not statistically significant. Opioid prescribing limits showed a statistically significant decrease after two years, but the difference was not statistically significant in other years.

Figure 4: Impact of policies on prescribing

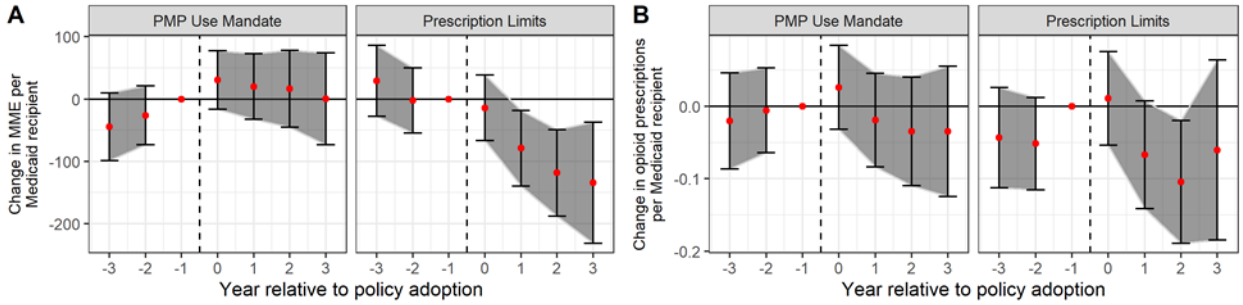
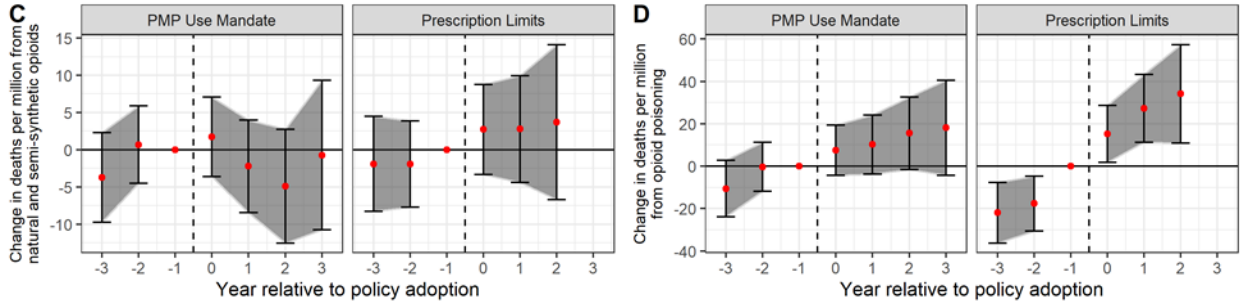


Figure 5, chart C finds no statistically significant differences in overdose deaths from "natural or semi-synthetic opioids", the category that includes most prescription opioids, in the years following passage of either policy.

In chart D, we find no statistically significant differences in total opioid poisoning deaths (deaths from any type of prescription or illicit opioid) for the mandatory PDMP use policy. We did find, however, that mortality from total opioid poisoning was significantly higher in states that adopted prescription limits. There is strong reason to reject this finding. Unlike the models represented in the other three charts, this model violated one of our critical assumptions to assess causality, namely, we that there are not differences in trends *before* the policy was enacted. On average, opioid poisoning deaths were increasing faster in the three years *before* states passed the laws, and continued increasing in the years after states passed the laws, compared with states that did not pass the laws. This provides evidence that the increases in opioid poisoning deaths were the continuation of a pre-existing trend in states that adopted prescribing limits, not a new difference caused by the adoption of prescribing limits.

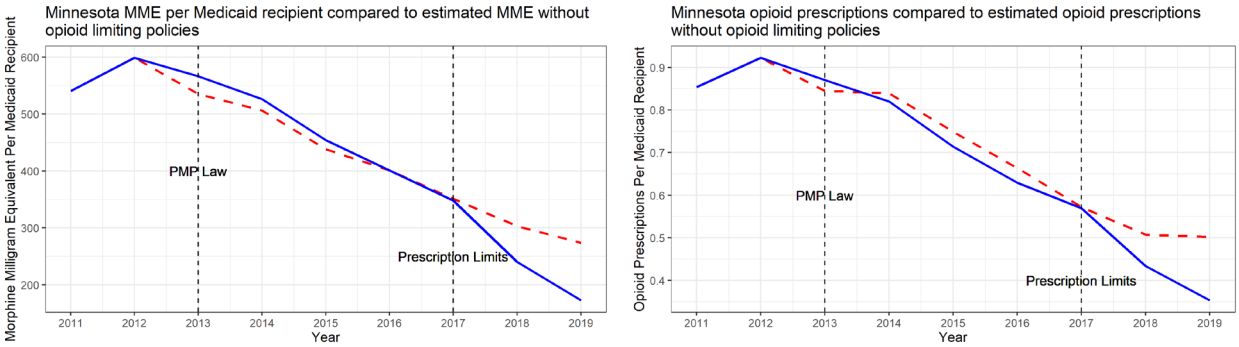
Figure 5: Impact of policies on opioid overdose deaths



While the above results examine trends in 38 states, we also can use the resulting model to estimate the average changes in prescribing that would have happened in Minnesota had it not adopted these policies. In Figure 6, the blue line represents actual prescribing, while the red line shows what we estimate prescribing would have been without the policies. In the left chart, we see that MMEs per Medicaid recipient fell dramatically after the introduction of prescription limits. We expect that MMEs would have fallen more gradually if Minnesota stayed on the trend line observed in states without these laws. In the right chart, we see that in the years following the PDMP law, actual prescribing fell below what we would have expected if no policy had changed; the number of prescriptions fell at a faster rate

after the introduction of the prescription limit. We'll discuss the implications of these findings in more detail in the next section.

Figure 6: Minnesota-specific results for MMEs and opioid prescriptions per Medicaid recipient



Finally, we conducted an exploratory analysis to assess whether states that passed more comprehensive policies saw larger declines in opioid prescribing than states that passed more limited policies. For example, comprehensive PDMP use laws require prescribers to access the PDMP before prescribing any Schedule II or III opioid, and periodic checks during long-term opioid prescribing. Comprehensive prescribing limits apply to all prescriptions written for acute pain.

We found that there were not significant differences in either the number or strength of prescriptions for comprehensive PDMP use and prescription limiting policies, compared with more limited policies. However, any influence that policies may have crossed state lines, such as by increasing the perceived importance of reducing opioid prescribing, making it more difficult to see a difference between more and less comprehensive policies. Appendix C of the full technical report, available upon request from ResultsFirstMN@state.mn.us, includes a detailed view of this exploratory analysis.

Discussion and Conclusions

Starting in the 1990s, a rapid rise in opioid prescribing presaged an opioid epidemic that cost the lives of thousands of Minnesotans and hundreds of thousands of Americans. As the salience of the crisis rose, federal and state officials took steps to ameliorate the harm, including mandating prescribers consult PDMPs before prescribing opioids and limiting the number of days of opioids can be prescribe.

This analysis provides evidence that enacting prescribing limits had modest, but important impacts on opioid prescribing for Medicaid recipients in states that enacted them. States with prescription limits saw statistically significant reductions in prescribing strength (-119 MMEs per Medicaid recipient after two years) and number of prescriptions (-.13 prescriptions per Medicaid recipient after two years). Mandatory PDMP use policies, however, had no significant effect on MMEs or the number of prescriptions.

This analysis also examined the impact of these policies on prescription and overall opioid overdose deaths. This analysis found no impact on opioid poisoning-related deaths in states with PDMPs. In our standard model, there was an association between prescription limits and rising opioid-related poisoning deaths, but we are skeptical of this finding because these opioid deaths began rising several

years before the states adopted these policies. It is more likely that the increasing death rates continued, and these policies were not sufficient to staunch a surge in deaths, not that the laws themselves caused higher mortality.

This lack of an apparent effect of policies on mortality is notable, as proponents of such policies saw them as ways to reduce addiction and its potential for injury and death, yet other popular narratives and some empirical evidence arose that limiting opioid prescribing could make patients turn to more dangerous illicit drugs to treat pain and addiction (Alpert, Powell, & Pacula, 2018; S. G. Kertesz & Gordon, 2019; S. Kertesz & Satel, 2017; Stone & Aubrey, 2019). Our findings are consistent with these policies having no adverse effects on opioid mortality.

Our analysis has several important limitations. We had access only to data on prescriptions reimbursed by Medicaid. This limitation likely reduced our ability to identify differential effects of policies, especially those that applied only to Medicaid recipients, versus applying to the full population, and we were unable to look at the characteristics of the recipients themselves. More broadly, it is difficult to assess if these findings are generalizable to the full population. Medicaid recipients are, on average, more likely to be a person of color, in poverty, and have worse health than those on other types of health insurance. On one hand, prescribers may treat this population differently; on the other, prescribers may evenly apply prescribing practices across their entire caseload. This analysis did not have access to the data necessary to interrogate those differences.

Moreover, the "population" of states and years of available data were finite, limiting our ability to see small impacts. This problem is particularly acute for examining how variations (e.g., strength of policy, enforcement mechanisms) in prescribing limits and PDMPs policy may impact the results of the program. We also are lacking data for outcomes that may better capture the impact of programs—particularly PDMPs—such as changes on co-prescribing, reductions in use for high-risk patients, or changes in illicit behavior by prescribers or patients. Currently, Minnesota statute (§152.126) prohibits sharing of this data for evaluation purposes, and no other publicly available sources exists. This lack of data limits our ability understand and make changes that improve the efficacy of Minnesota's PDMP.

Regardless of these limitations, these findings offer important policy implications for states. Prescription limits are effective and readily available policy levers to reduce the number of prescriptions and their strength. This is important, as many individuals misusing opioids were initially exposed by prescription opioids, and policies that limit supply have been shown to decrease misuse (Barnett et al., 2020). While the extant mandatory PDMP policies nationwide, overall, did not have a statistically significant impact on prescribing, these policies do not show evidence of being associated with negative outcomes some feared, like increases in illicit opioid-overdose deaths.

Overall this analysis finds neither policy is a panacea. Given this evidence and similar findings from prior research[1], a robust continuum of evidence-based programming— across all of prevention, early intervention, treatment, and recovery services—is needed to lessen the tremendous harm of opioids.[2]

[1] See Barnett et al., 2020 for a current state of evidence-based practices in opioid-related harm abatement.
[2] For more details on evidence-based practices that reduce substance use across the care continuum, see https://mn.gov/mmb-stat/results-first/substance-use-report.pdf

For more, please our full technical report is available upon request from ResultsFirstMN@state.mn.us

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Appendix A: Timeline of opioid prescription limiting policies

This table identifies classes of state policies adopted on or before December 31, 2019, that establish limits on the duration and/or dose of opioid pills that can be prescribed in at least some circumstances.

State	Policy type	Effective date (Quarter, Year)
Alaska	Limits all initial prescriptions	Q3 2017
Alabama	N/A	
Arkansas	N/A	
Arizona	Limits initial prescriptions for Medicaid recipients	Q4 2016
	Limits all initial prescriptions	Q1 2018
California	N/A	
Colorado	Limits initial prescriptions for Medicaid recipients	Q3 2017
	Limits all initial prescriptions	Q2 2018
Connecticut	Limits all initial prescriptions	Q2 2016
District of Columbia	N/A	
Delaware	Limits all initial prescriptions	Q2 2017
Florida	Limits all initial prescriptions	Q3 2018
Georgia	N/A	
Hawaii	Limits concurrent opioid and benzodiazepine prescriptions	Q3 2017
Iowa	Medical board authorized to penalize over-prescribers	Q2 2018
Idaho	N/A	
Illinois	N/A	
Indiana	Limits all initial prescriptions	Q2 2017
Kansas	N/A	

Kentucky	Limits all initial prescriptions	Q2 2017
Louisiana	Limits all initial prescriptions	Q2 2017
Massachusetts	Limits all initial prescriptions	Q1 2016
Maryland	Required "lowest effective dose"	Q2 2017
Maine	Limits all initial prescriptions	Q2 2016
Michigan	Limits prescriptions for acute pain	Q4 2017
Minnesota	Limits for dental and ophthalmologic pain	Q2 2017
	Limits all initial prescriptions	Q2 2019
Missouri	Limits initial prescriptions for Medicaid recipients	Q1 2017
Mississippi	N/A	
Montana	Limits prescriptions for opioid-naïve patients	Q1 2019
North Carolina	Limits all initial prescriptions	Q3 2017
North Dakota	N/A	
Nebraska	Limits prescriptions for Medicaid recipients to 150 short-acting pills and 30 days	Q4 2016
New Hampshire	Board of Medicine directed to limit prescribing	Q2 2016
	Board of Medicine limits prescriptions for emergency room/urgent care/walk-in	Q1 2017
New Jersey	Limits all initial prescriptions	Q1 2017
New Mexico	N/A	
Nevada	Limits all initial prescriptions	Q3 2017

New York	Limits all initial prescriptions	Q2 2016
Ohio	Limits all initial prescriptions	Q3 2017
Oklahoma	Limits prescriptions for acute pain	Q2 2018
Oregon	N/A	
Pennsylvania	Limits prescriptions for emergency room/urgent care/hospital care, all prescriptions for minors	Q4 2016
Rhode Island	Limits all initial prescriptions	Q2 2016
South Carolina	Limits initial prescriptions for Medicaid patients	Q2 2018
South Dakota	N/A	
Tennessee	Limits all initial prescriptions	Q2 2018
Texas	Limits prescriptions for acute pain	Q2 2019
Utah	Limits prescriptions for acute pain	Q1 2017
Virginia	Limits prescriptions for acute pain	Q1 2017
Vermont	Limits initial prescriptions for acute pain	Q2 2016
Washington	Limits prescriptions for Medicaid recipients	Q2 2017
Wisconsin	N/A	
West Virginia	Limits all initial prescriptions	Q1 2018
Wyoming	Limits all initial prescriptions	Q1 2019

Appendix B: Timeline of mandatory prescription drug monitoring program use policies[3]

This table identifies classes of state policies adopted on or before December 31, 2019, that allow prescribers to access the state's prescription drug monitoring program or require such access in at least some circumstances. Policies adopted at or before the first quarter of 2006 are bottom coded. Each policy type is defined as follows:

- Available to prescribers: State has PDMP available to prescribers
- Limited use mandate: Clinicians are required to access PDMP in certain defined circumstances.
- Comprehensive use mandate: PDMP use requirement that satisfies all of the following criteria:
    - Specifies defined criteria for checking the PDMP
    - Covers at least Schedule II and Schedule III drugs
    - Covers a wide array of prescribing contexts (e.g. beyond outpatient treatment programs)
    - Requires PDMP checks before initial prescriptions
    - Requires regular checks during long-term opioid prescriptions
    - May include reasonable exemptions (e.g. hospice care)

State	Policy type	Effective date (Quarter, Year)
Alaska	Available to prescribers	Q3 2008
	Limited use mandate	Q2 2016
Alabama	Available to prescribers	Q3 2004
Arkansas	Available to prescribers	Q1 2013
	Limited use mandate	Q2 2015
	Comprehensive use mandate	Q2 2017
Arizona	Available to prescribers	Q3 2007
	Comprehensive use mandate	Q2 2016
California	Available to prescribers	Q1 2003
	Comprehensive use mandate	Q2 2016

[3] **Additional appendix sources:**

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State PDMP Profiles and Contacts. (2020). Retrieved from Prescription Drug Monitoring Program Training and Technical Assistance Center website: https://www.pdmpassist.org/State

Colorado	Available to prescribers	Q2 2005
	Limited use mandate	Q2 2018
Connecticut	Available to prescribers	Q3 2006
	Comprehensive use mandate	Q2 2015
District of Columbia	Available to prescribers	Q4 2014
Delaware	Limited use mandate	Q1 2012
Florida	Available to prescribers	Q3 2009
	Limited use mandate	Q1 2018
Georgia	Available to prescribers	Q3 2011
	Comprehensive use mandate	Q2 2017
Hawaii	Available to prescribers	Q1 1998
	Limited use mandate	Q3 2018
Iowa	Available to prescribers	Q2 2006
	Limited use mandate	Q2 2018
Idaho	Available to prescribers	Q2 2000
Illinois	Available to prescribers	Q2 2000
	Limited use mandate	Q4 2017
Indiana	Available to prescribers	Q3 2007
	Limited use mandate	Q3 2014
	Comprehensive use mandate	Q1 2018
Kansas	Available to prescribers	Q3 2008
Kentucky	Available to prescribers	Q3 1998
	Comprehensive use mandate	Q3 2012
Louisiana	Available to prescribers	Q3 2006
	Limited use mandate	Q2 2010
	Comprehensive use mandate	Q2 2017
Massachusetts	Available to prescribers	Q1 1998
	Comprehensive use mandate	Q4 2014
Maryland	Available to prescribers	Q4 2011
	Comprehensive use mandate	Q2 2016

Maine	Available to prescribers	Q3 2003
	Comprehensive use mandate	Q2 2016
Michigan	Available to prescribers	Q1 2002
	Limited use mandate	Q4 2017
Minnesota	Available to prescribers	Q3 2007
	Limited use mandate	Q3 2013
	Comprehensive use mandate	Q2 2019
Missouri	N/A	
Mississippi	Available to prescribers	Q2 2006
	Limited use mandate	Q3 2012
Montana	Available to prescribers	Q3 2011
	Comprehensive use mandate	Q1 2019
North Carolina	Available to prescribers	Q1 2006
	Comprehensive use mandate	Q2 2017
North Dakota	Available to prescribers	Q2 2007
	Limited use mandate	Q3 2014
Nebraska	Available to prescribers	Q3 2011
New Hampshire	Available to prescribers	Q2 2012
	Comprehensive use mandate	Q2 2016
New Jersey	Available to prescribers	Q3 2009
	Limited use mandate	Q3 2015
	Comprehensive use mandate	Q1 2017
New Mexico	Available to prescribers	Q3 2004
	Comprehensive use mandate	Q3 2012
Nevada	Available to prescribers	Q1 1998
	Limited use mandate	Q4 2007
New York	Available to prescribers	Q2 2001
	Comprehensive use mandate	Q3 2013
Ohio	Available to prescribers	Q2 2005
	Limited use mandate	Q4 2011

Oklahoma	Available to prescribers	Q2 1990
	Limited use mandate	Q4 2010
Oregon	Available to prescribers	Q3 2009
Pennsylvania	Comprehensive use mandate	Q4 2016
Rhode Island	Limited use mandate	Q2 2010
	Comprehensive use mandate	Q2 2016
South Carolina	Available to prescribers	Q2 2006
	Limited use mandate	Q2 2017
South Dakota	Available to prescribers	Q3 2010
Tennessee	Available to prescribers	Q1 2003
	Limited use mandate	Q1 2012
	Comprehensive use mandate	Q2 2013
Texas	Available to prescribers	Q3 1981
	Limited use mandate	Q2 2017
Utah	Available to prescribers	Q1 1995
	Limited use mandate	Q1 2016
	Comprehensive use mandate	Q1 2017
Virginia	Available to prescribers	Q2 2003
	Limited use mandate	Q4 2011
Vermont	Available to prescribers	Q3 2006
	Limited use mandate	Q2 2012
	Comprehensive use mandate	Q3 2013
Washington	Available to prescribers	Q3 2007
	Limited use mandate	Q3 2013
Wisconsin	Available to prescribers	Q2 2013
	Limited use mandate	Q1 2016
West Virginia	Available to prescribers	Q3 2002
	Comprehensive use mandate	Q2 2013
Wyoming	Available to prescribers	Q2 2003
	Comprehensive use mandate	Q1 2019