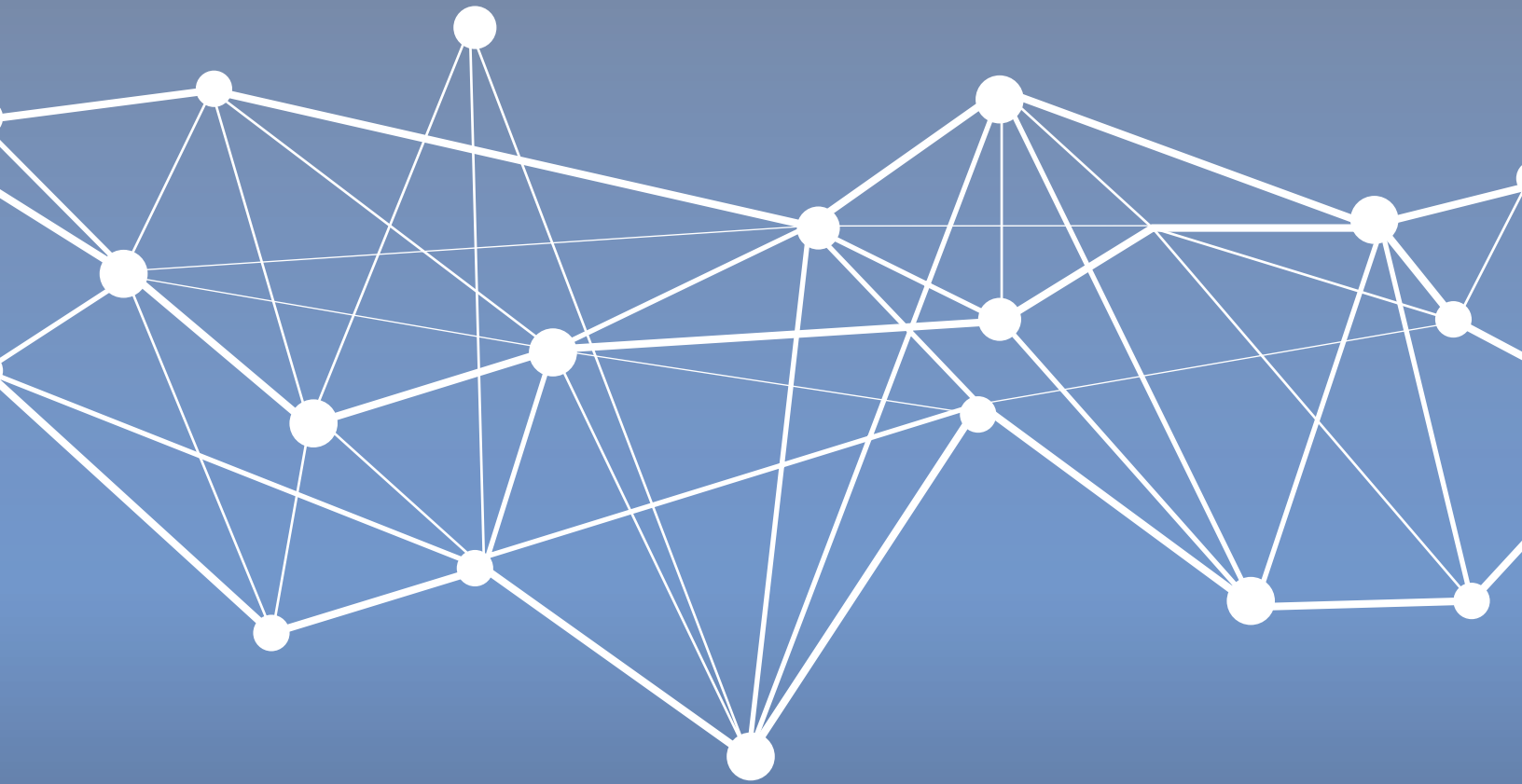


# Use of Medicaid Data Sources to Identify and Manage Patients and Providers With Problematic Opioid Behavior

Policy Brief  
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## TABLE OF CONTENTS

Overview.....	3
Key Findings .....	3
Background.....	5
Key Questions.....	5
Methods .....	5
Findings .....	5
Overview of State Use of Data Sources for Opioid-related Work .....	6
Featured Initiatives .....	11
Other Relevant Findings.....	19
Discussion.....	20
References .....	23
Appendix A. Methods.....	26
Search Strategy.....	26
Policy Sources Searched.....	26
Methods for Key Informant Interviews .....	26
Interview Contacts.....	27

## OVERVIEW

This report describes strategies adopted by state Medicaid programs to use data to address aspects of the opioid crisis. The focus is how state Medicaid staff use data to identify clinicians and patients with problematic opioid-related behavior and what they do to address these behaviors.

Center for Evidence-based Policy (Center) staff reviewed Center core policy sources and interviewed officials and Medicaid program staff from 6 states: Minnesota, Nebraska, South Dakota, Tennessee, Washington, and Wisconsin. Center researchers found that Medicaid staff in all 6 states routinely use medical and pharmacy paid claims and managed care encounter data in their opioid-related efforts, but access to and use of other data sources such as prescription drug monitoring program (PDMP); health information exchange (HIE); and admission, discharge, and transfer (ADT) data varied significantly. This report provides an overview of how data is used in these 6 states and describes opioid-related data projects in 3 of these states.

## KEY FINDINGS

### Data Sources

- The primary data source used by all states in opioid-related data work was medical and pharmacy paid claims and managed care encounter data.
- Pharmacy point of sale (POS) systems are used to implement pharmacy policy through claims edits and prior authorization requirements, and also provide pharmacy claims data.
- Access to PDMP data varied by state. Medicaid program staff in 2 states had the ability to query the PDMP for individual patients, while both Tennessee and Washington had access to batch PDMP data matched to all Medicaid beneficiaries. PDMP data was considered particularly useful when analyzing opioid and benzodiazepine

prescriptions as the record included prescriptions for Medicaid patients not recorded in claims data (e.g., prescriptions paid for in cash or prescribed by non-Medicaid enrolled providers).

- Nebraska and Washington Medicaid staff both reported access to HIE data. Nebraska's access was newly authorized and state officials were still negotiating how they would access and use HIE data. Washington Medicaid staff reported they did not use HIE data for opioid-related initiatives.
- Three states, Nebraska, Tennessee, and Washington used ADT data to create programs to respond to opioid-related emergency department visits or hospitalizations.
- Two states had used state vital records data to support opioid-related initiatives, including a project on opioid overdose in Washington and work to reduce neonatal abstinence syndrome (NAS) and low-birth-weight newborns in Minnesota.

### Opioid-related Interventions Supported by Data

- All states used data to support initiatives to reduce inappropriate prescribing and utilization of opioids. Most initiatives were part of regular drug utilization review (DUR) board activities and included mailing letters to prescribers about patients or the clinician's prescribing practices, and, in 5 out of 6 states, enrolling patients who met certain criteria into pharmacy or provider lock-in programs.
- South Dakota Medicaid and the Minnesota Department of Health Services both implemented opioid prescribing improvement projects with several components. South Dakota partnered with its Pharmacy & Therapeutics (P&T) committee, the state's medical societies, and the major health systems to update Medicaid pharmacy policy and educate clinicians about new policies and best practices. Minnesota worked with a legislatively created Opioid Prescribing Improvement Project to create opioid

prescribing guidelines, patient and provider education materials, and prescriber report cards with peer comparisons on 7 opioid prescribing metrics. Prescribers exceeding an established threshold on 5 of the 7 metrics will be required to complete a quality improvement project.

- Tennessee Medicaid worked with its MCOs to create a predictive clinical risk stratification model around opioid use in women of childbearing age to support the MCOs opioid-related care coordination efforts, improve access to substance use disorder (SUD) treatment, and reduce the incidence of NAS.
- Three state Medicaid agencies reported using ADT data to create responses to opioid-related emergency department visits or hospitalizations. Washington and Nebraska use ADT data to provide alerts directly to prescribing clinicians or primary care physicians. Tennessee uses ADT data to alert the managed care organizations (MCOs), which then reach out to patients to offer services or enroll them in care coordination programs. Tennessee's indirect approach is due to the potential privacy limitations of 42 CFR Part 2.
- No states reported any issues with privacy restrictions related to the Health Insurance Portability and Accountability Act (HIPAA). Access to PDMP data was often limited for patient confidentiality reasons, although limitations were not consistent across all states.
- Key informants reported their opioid-related work had been shifting away from a concentrated focus on prescribing behavior to a new priority of addressing access to and quality of SUD treatment, specifically, medication-assisted treatment (MAT).

### **Advantages and Disadvantages of Data Sources**

- Medical and pharmacy paid claims and managed care encounter data were familiar for Medicaid programs to use, allowed for prospective and retrospective review, and provided information

about a large number of prescribers and patients. The major disadvantage to claims data is there is often a significant lag time, particularly for medical claims.

- PDMP data was valuable as it provided a more accurate picture of a patient's controlled substance use, including claims from outside of Medicaid, but access was restricted due to privacy concerns in many states.
- Nebraska's HIE system has the potential to greatly expand Medicaid's ability to analyze data and has the added advantage of hosting a longitudinal patient medical record across all payers, which provides information about Medicaid patients even when their health care is not provided through Medicaid.
- In general, key informants expressed an interest in having better access to more data sources and to linking data across sources. Key informants were particularly interested in increasing their access to certain clinical data such as lab results and care plans.

### **Medicaid Participation in Statewide Data Analysis Efforts**

- Based on pilot projects by Washington Medicaid, the Washington legislature voted to mandate state implementation of prescriber report cards and overdose notifications. Washington Medicaid staff continues to consult on these efforts.
- Medicaid staff primarily reported on Medicaid-specific data efforts or initiatives partnering with provider organizations and MCOs, although Wisconsin's statewide opioid coordinator participated in a key informant interview and noted Wisconsin Medicaid staff participate in statewide opioid efforts.

## BACKGROUND

State Medicaid programs routinely analyze paid claims and managed care encounter data to better understand its patient populations, provide reports on program costs and services to state and federal partners, and to analyze whether policy interventions have had their intended effect. Recently, some state Medicaid programs have obtained access to new data sources, such as information from PDMPs, HIEs, and ADT data. This report describes how state Medicaid programs are using data to address issues related to opioid overuse and abuse.

## KEY QUESTIONS

1. How do state Medicaid programs use data from the following data systems to identify patients or providers with problematic opioid behaviors?
  - a. Claims (fee-for-service) or encounter data (managed care)
  - b. Pharmacy point of sale (POS) systems
  - c. PDMPs
  - d. HIEs
2. How do state Medicaid programs use these data to identify patients or providers with problematic opioid behaviors?
  - a. What actions, behaviors, or patterns of behaviors are state officials trying to identify through data analysis (e.g., patients receiving prescriptions from multiple providers; providers writing prescriptions for high dosages without creating an opioid safety plan for the patient)?
  - b. How do states address privacy and data-sharing regulations such as HIPAA and privacy of SUD patient records under 42 CFR Part 2?
3. What do Medicaid program administrators do after identifying a patient or provider with potentially problematic opioid behavior?
4. What are the advantages and disadvantages of using these various data systems to address opioid-related issues?

5. How do state Medicaid officials participate in statewide data analysis efforts?

## METHODS

Center researchers searched Center core policy sources and Google for gray literature on the use of data to address opioid issues by state Medicaid agencies, and reviewed reference lists for additional citations. Center researchers searched state websites and interviewed Medicaid staff and state officials from 6 states: Minnesota, Nebraska, South Dakota, Tennessee, Washington, and Wisconsin. See Appendix A for a full description of methods, a list of sources searched, and a list of interviewees.

## FINDINGS

The primary data sources states used to address opioid-related issues were its medical and pharmacy paid claims and managed care encounter data. States varied in the ability to access and use data from other sources including PDMPs and ADT data; both Washington and Nebraska provide access to statewide HIE data to authorized Medicaid staff but neither state reported specific opioid initiatives using HIE data.

All states engaged in projects to reduce inappropriate prescribing and inappropriate utilization of opioids. Three states had projects in effect or being planned to follow-up with patients who had been seen in the emergency department or hospital for opioid-related issues such as an overdose, and Tennessee worked with its MCOs to use data to engage women of childbearing age with certain risk factors in care coordination programs. This section of the report will briefly describe Medicaid access to and use of these data sources in 6 states and will then provide a detailed look at initiatives in South Dakota, Minnesota, and Tennessee.

## Overview of State Use of Data Sources for Opioid-related Work

This section of the report describes how state officials in 6 states use data from the following sources for their opioid-related policy work: paid claims and managed care encounter data, pharmacy POS systems, PDMPs, HIEs, ADT, and vital records. We reviewed documents and conducted key informant interviews with Medicaid officials in 5 states as well as the state opioid coordinator and former state health IT coordinator for the state of Wisconsin. Medicaid access to the data sources described in this report for the included Medicaid programs are summarized in Table 1.

### Paid Claims and Managed Care Encounter Data

All states reviewed in this report regularly analyze paid claims and managed care encounter data as part

of ongoing program oversight and state DUR board responsibilities. All states reported reviewing claims data to identify patients who fit certain concerning clinical profiles, such as filling opioid prescriptions early, having multiple or high-dose prescriptions, or having concomitant opioid and benzodiazepine prescriptions (Medicaid staff: Minnesota, South Dakota, Washington; R. Anderson, P. Krupski, personal communication). Once these patients had been identified, the Medicaid program generally sends letters or contacts clinicians to alert them of concerns and offer information about how to address the patient's situation (Medicaid staff: Minnesota, South Dakota, Washington; R. Anderson, P. Krupski, personal communication).

Five of the 6 states also operate lock-in or patient restriction programs for certain patients identified through data analysis; the exception was South Dakota where the P&T committee had considered, but not adopted, a lock-in program (Medicaid staff: Minnesota,

**Table 1. Data Sources Used by State Medicaid Agencies for Opioid-Related Initiatives Featured in This Report**

Data Source	Minnesota	Nebraska	South Dakota	Tennessee	Washington
Medical Claims	√	√	√	√	√
Pharmacy Claims (POS Systems)	√	√	√	√	√
PDMP Data – Individual Patient Inquiry		TBD	√	√	√
PDMP Data – Batch Data Matched to Medicaid Beneficiaries		TBD		√	√
HIE Data		√			√
ADT Data		√		√	√
Vital Records Data	√				√

*Abbreviations. ADT: Admission, Discharge and Transfer data; HIE: Health Information Exchange; PDMP: Prescription Drug Monitoring Program; POS: Point of Sale; TBD: to be determined; Nebraska Medicaid was still considering options for access to PDMP data when this report was prepared.*

South Dakota, Washington; R. Anderson, P. Krupski, personal communication).

States also reported using opioid data in ways that did not directly involve intervening with patients or clinicians. Most frequently, states reported using data to evaluate whether policy changes were having the intended impact. For example, when Washington adopted a pill count limit for opioid prescriptions for patients considered opioid naïve, Medicaid data analytics staff looked to see whether the policy change was associated with increased emergency department visits for pain or other unintended consequences (Washington Medicaid staff, personal communication). Opioid naïve is defined in Washington as never having been prescribed an opioid while covered by Medicaid.<sup>1</sup> Similarly, when Washington adopted an enhanced reimbursement rate for clinicians who prescribed buprenorphine prescriptions in an office-based setting, Medicaid staff monitored claims data to determine whether the rate change increased treatment capacity as intended (Washington Medicaid staff, personal communication).

States also reported using data to support MCOs and, in Washington, the Accountable Communities for Health (ACHs) that are part of Washington's Medicaid transformation infrastructure. In Washington, all the ACHs are required to do a project addressing opioid prescribing and the Medicaid data analytics team provides support when requested (Washington Medicaid staff, personal communication). For example, the ACH team in Tacoma created an academic detailing program to educate prescribers about appropriate opioid prescribing. Then the Medicaid analytics team provided the ACH with a list of clinicians who were out of compliance with the state's opioid prescribing guidelines so they could be included in the academic detailing education program (Washington Medicaid staff, personal communication).

### **Pharmacy Point of Sales Systems**

Pharmacy POS systems generate real-time pharmaceutical claims information for analysis and

also allow Medicaid programs to implement pharmacy policy by incorporating pharmacy edits into the POS system (R. Anderson, personal communication). We include a discussion of South Dakota's opioid prescribing initiative that relied heavily on POS edits (see page 10 of this report). Common pharmacy edits include limiting the dose and pill count of opioid prescriptions for patients who are categorized as opioid naïve (e.g., not having an opioid prescription filled in the last 60 to 90 days), limiting the total morphine milligram equivalent (MME) for patient opioid prescriptions, or requiring prior authorization for certain opioid prescriptions (e.g., high-dose prescriptions; prescriptions that combine both long-acting and short-acting opioids) (Medicaid staff: Minnesota, South Dakota, Washington; R. Anderson, personal communication). When analyzing data about pharmaceuticals, states generally rely on the claims data generated by POS systems and MCO encounter data or, when access is possible, PDMP data (Medicaid staff: Minnesota, South Dakota, Tennessee, Washington; R. Anderson, personal communication).

### **Prescription Drug Monitoring Program Data**

PDMPs operate in 49 states and the District of Columbia, but there is significant variation in how the programs are managed. State PDMP policies vary as to whether prescribers and dispensers are required to register and use the systems, whether participation is voluntary, and who is able to access the data and for what purposes.<sup>2-5</sup> The primary purpose of PDMPs is to collect information on the prescribing and dispensing of controlled substances, although states vary on whether they collect information on a limited number of controlled substances or all schedule II through V controlled substances.<sup>2-5</sup> Nebraska is notable because, as of January 1, 2018, it became the only state to collect data on all dispensed prescriptions in its PDMP rather than limiting the information collected to controlled substances, as is the case in other states.<sup>6,7</sup>

The value of PDMP data is it includes information on all controlled substance prescriptions dispensed to an individual, even those not included in Medicaid claims data. PDMP data includes information about prescriptions paid for in cash or those prescribed for Medicaid patients by providers not enrolled in the Medicaid program. Access to PDMP data allows for a more complete picture of a patient's record of controlled substance prescriptions. PDMP data does not, however, include clinical information such as a patient's diagnosis. PDMP data often needs to be matched with claims data for analysis purposes.

State access to PDMP data varies. Medicaid program staff in South Dakota and Washington are able to query the PDMP about specific patients, while access to PDMP data in Minnesota is limited to staff in the office of the inspector general (Medicaid staff: Minnesota, South Dakota, Washington, personal communication). Wisconsin Medicaid is developing capability that will allow staff to query the PDMP about specific patients and link the information to claims data (P. Krupski, personal communication). Individual queries of patients generally occur when Medicaid staff has a concern about a patient due to a DUR project, or because of a call regarding a patient from a pharmacy or provider (South Dakota Medicaid staff, personal communication).<sup>8</sup>

The Nebraska legislature granted Medicaid staff access to PDMP data during the most recent legislative session and Medicaid is currently working with staff at the Department of Health and Human Services to determine how they will be able to access and use that data (Nebraska Medicaid staff, personal communication).

Medicaid staff in both Washington and Tennessee receive batch PDMP data matched to all enrolled Medicaid patients, allowing them access to the complete data set rather than limiting it to individual queries of patients (Medicaid staff: Tennessee, Washington, personal communication).

The 2007 legislation enabling the Washington PDMP specifically granted Medicaid staff access to PDMP

data for Medicaid program recipients.<sup>8</sup> In addition to being able to query individual patients, staff from the Health Care Authority send the Department of Health a list of all Medicaid-eligible clients each month and the department forwards the information to the state's PDMP vendor; the vendor then matches the Medicaid list to PDMP data and returns a file with each Medicaid patient's PDMP history.<sup>8</sup>

PDMP data are primarily used by program staff to support the state's Patient Review and Coordination or lock-in program, but can also be used to identify patients receiving opioids in doses exceeding the state's MME threshold, who are then referred for care coordination or intervention with the patient's prescriber (Washington Medicaid staff, personal communication).<sup>8</sup> PDMP data are also used by the Medicaid program's fraud and investigations unit for identifying problematic prescribers for referral to the state licensing board.<sup>8</sup> These data were also used to identify pharmacies that violate Medicaid program requirements by accepting cash payment for prescriptions that duplicate prescriptions paid for by Medicaid, although this work has not continued (Washington Medicaid staff, personal communication).<sup>8</sup> The investigative initiatives are not the responsibility of Medicaid program staff and are not coordinated by Washington Medicaid (Washington Medicaid staff, personal communication).<sup>8</sup>

In Tennessee, Medicaid staff went to the committee overseeing the PDMP at the Department of Health and negotiated to get a batch transfer of PDMP data for Medicaid patients (Tennessee Medicaid staff, personal communication). According to Medicaid staff, the PDMP committee was initially reluctant to share the data, but Medicaid staff made a strong case that to properly address opioid use among Medicaid patients, program staff needed information about the patient's entire prescription history (Tennessee Medicaid staff, personal communication). Once analyzed, the PDMP data provided critical information to program staff about Medicaid recipients. The data demonstrated that the majority of benzodiazepine



prescriptions given to Medicaid recipients were prescribed and filled outside of Medicaid (Tennessee Medicaid staff, personal communication). They also found a significant proportion of opioid prescriptions were not recorded in claims data (Tennessee Medicaid staff, personal communication). The data also showed there were a number of Medicaid patients who were filling buprenorphine prescriptions outside of Medicaid, and thus not receiving additional services such as care coordination and case management offered by the Medicaid MCOs (Tennessee Medicaid staff, personal communication).

Medicaid staff in both Washington and Tennessee noted that matching PDMP data to Medicaid patient records was not simple. Requiring the PDMP to record the National Provider Identifier (NPI) for prescribers in addition to the prescriber's Drug Enforcement Administration (DEA) number helped data matching, as Medicaid uses the NPI in their records (Medicaid staff: Washington, Tennessee, personal communication).

Finally, in Washington, the Department of Health is implementing a legislatively mandated initiative using PDMP data originally piloted in Medicaid using claims data. Using funds from a Centers for Disease Control and Prevention (CDC) grant, Washington Medicaid created prescriber report cards that reported on 3 opioid prescribing metrics with letters sent to prescribers over a 3-year time period (Washington Medicaid staff, personal communication). Subsequently, the legislature passed a bill directing the Department of Health to work with the Health Care Authority and the state medical association to use PDMP data to issue clinician report cards on opioid prescribing, which include peer comparisons based on 4 distinct provider groups (primary care, surgeons, specialists, and "other") (Washington Medicaid staff, personal communication).<sup>9</sup>

The use of PDMP data that includes information on all prescribing in the state rather than just prescriptions written for Medicaid patients is an advantage for these reports (Washington Medicaid staff, personal

communication). The work group implementing the law finalized the individual prescriber feedback letters and is now working to create facility-level reports so chief medical officers will receive an overall report on the prescribing behavior of their clinicians, also with peer comparisons. See page 14 for a discussion of a similar legislatively mandated initiative in Minnesota that uses claims data for prescriber reporting (Washington Medicaid staff, personal communication).

### Health Information Exchange Data

HIE systems allow health care providers, patients, and, in some cases, payers such as Medicaid or Medicaid MCOs, access to a patient's medical record through a secure electronic system.<sup>10</sup> The benefits of HIE data is it allows access to clinical information not found in claims data (e.g., lab test results) and provides a continuous patient medical history, not limited by payer.<sup>10</sup>

Nebraska and Washington were the only states that reported Medicaid access to HIE data, although Washington Medicaid did not report using HIE data for opioid-related initiatives (Washington Medicaid staff, personal communication).

The Nebraska Health Information Initiative (NEHII) was created as a 501(c)(3) nonprofit corporation in 2008.<sup>11</sup> In 2017, the Nebraska PDMP was integrated into the NEHII platform and in 2019, Nebraska Medicaid was granted access to both HIE and PDMP data through NEHII (Nebraska Medicaid staff, personal communication).<sup>7</sup> Nebraska Medicaid staff is currently working with NEHII personnel to determine how those data will be accessed and what data projects they will adopt (Nebraska Medicaid staff, personal communication).

One project they are considering is using the data to supplement specific Medicaid DUR projects (Nebraska Medicaid staff, personal communication). For example, if a patient has been identified through DUR as having multiple prescriptions, an alert could be set up in the HIE to notify Medicaid and the MCO if that patient is seen in the emergency department,

which might indicate a need for intervention or case management (Nebraska Medicaid staff, personal communication). Before Medicaid gained access to HIE data, all of the Medicaid MCOs had enrolled in the system and were using data for their own projects (J. Bland, personal communication). The MCOs used the information from the HIE and PDMP to monitor adherence to opioid prescribing guidelines and were able to intervene with physicians who were not following approved guidelines (J. Bland, personal communication).

In addition, patients receiving opioids for chronic pain were required to have a signed patient contract with their prescribing physician. These physicians were able to sign up for alerts from NEHII to alert them if their patient filled an opioid prescription from a different prescriber (J. Bland, personal communication).

NEHII staff is also working with Medicaid staff to prepare for Medicaid expansion in 2020 (Nebraska Medicaid staff, personal communication). One opioid-related project is to look at NAS prevalence and help Nebraska Medicaid plan for the services and resources the NAS population will require in the future (J. Bland, personal communication).

### **Admission, Discharge, and Transfer Data**

Three states reported initiatives using ADT data in some way to identify patients who had been seen in the emergency department or admitted to the hospital for opioid-related conditions, but different interpretations of 42 CFR Part 2 shaped how Medicaid staff were able to use these data.

The regulations in 42 CFR Part 2 govern the confidentiality of SUD patient records.<sup>12</sup> In particular, these regulations impose restrictions on the use and disclosure of SUD patient records by federally assisted programs as defined in §2.11.<sup>12</sup> There are different interpretations as to how 42 CFR Part 2 applies to patient records outside of the SUD treatment system (D. Webb, personal communication). A broad interpretation of 42 CFR Part 2 allows for the sharing of patient information about services provided outside

of the SUD treatment facility or program, which permits Medicaid programs to share information about emergency department services or hospitalizations related to SUD (D. Webb, personal communication). A narrow interpretation restricts what information can be shared, and to which individuals or entities outside of the SUD treatment system it can be shared with.

A qualitative analysis on the perceived impacts of 42 CFR Part 2 on care coordination also highlighted the legal confusion that exists around these regulations.<sup>13</sup> The interviewees noted their unease with how to interpret and follow these regulations, and noted this confusion was impeding their ability to provide coordinated, team-based care and address behavioral health issues in the primary care setting.<sup>13</sup> There is not a clear consensus on the issue, and state Medicaid programs and their legal advisors differ on the appropriate interpretation.

In Washington, the CDC grant managed by Medicaid staff that piloted the prescriber letters also funded an initiative to alert clinicians when one of their patients had been seen in the emergency department for an opioid overdose (Washington Medicaid staff, personal communication). The original initiative analyzed claims data and when patients were identified, clinicians were sent a letter informing them that their patient had been treated for an opioid-related event. The letter included information about overdose prevention and opioid use disorder, and how patients can access services such as SUD treatment and alternative pain management (Washington Medicaid staff, personal communication). Providers also had the option to call the University of Washington's pain and opioid consult hotline for clinicians; the consult services are free to the clinician and paid for by the Washington Health Care Authority (Washington Medicaid staff, personal communication).

Because this program used claims data, there was a significant lag time in notifying clinicians about their patient's experience, varying from 3 to 6 months, depending on the claim and provider type

(Washington Medicaid staff, personal communication). In response to the Medicaid effort and as part of a realization that notifications should be more timely, the legislature passed legislation in 2017 requiring that the Department of Health create a system to notify clinicians of overdose events using the information collected in the state's Emergency Department Information Exchange (EDIE) system (Washington Medicaid staff, personal communication).<sup>9</sup>

Washington Medicaid staff participates in the work group overseeing the overdose notification initiative (Washington Medicaid staff, personal communication). Washington State is an example of when legal counsel has interpreted 42 CFR Part 2 broadly as it applies to sharing patient data outside of the SUD treatment setting. Washington's legal counsel noted that the appropriate sharing of opioid overdose information gathered from emergency departments is controlled by HIPAA and state health care privacy laws, but is not subject to the federal protections for substance use disorder treatment information in 42 CFR Part 2 (Washington Medicaid staff, personal communication).

In Nebraska, NEHII offers clinicians the option to sign up for alerts for their patients, which can include notification of any emergency department visits or hospitalizations (J. Bland, personal communication). These alerts can be customized to add a flag for opioid-related treatments, but adding the flag is up to the provider or plan (e.g., Medicaid MCO) (J. Bland, personal communication).

Tennessee Medicaid has a narrower interpretation of the sharing of ADT information under 42 CFR Part 2. Tennessee Medicaid staff has access to ADT data from hospitals but is unable to unmask the diagnosis data related to substance abuse and provide that directly to providers. Instead, Tennessee Medicaid is implementing a program that would notify a patient's MCO of opioid-related events; the MCO is then charged with following up with the patient to see if they need additional service, support, or to enroll them in care coordination or case management programs (Tennessee Medicaid staff,

personal communication). Development of the care coordination workflows with the MCOs is still ongoing (Tennessee Medicaid staff, personal communication).

### **Vital Records Data**

As with PDMP data and 42 CFR Part 2, different interpretations of federal and state laws affect Medicaid program staff's ability to match vital records and Medicaid data. Two states reported using vital records including birth and death records as part of their opioid-related work, but the data were not used to facilitate any particular intervention with patients or clinicians. In Washington, state Medicaid staff have used Department of Health death records to identify overdose deaths among Medicaid recipients, although the analyses were used for internal decision making and policy development, and have not yet resulted in any specific intervention for clinicians or patients (Washington Medicaid staff, personal communication).

Minnesota Medicaid staff have successfully linked state birth records from the state Department of Health to Medicaid claims and enrollment data as part of their initiative to reduce NAS and low birth weight deliveries (Minnesota Medicaid staff, personal communications). Again, the information was primarily used to better understand the population and to facilitate program development, rather than identify particular patients for an intervention (Minnesota Medicaid staff, personal communication.)

### **Featured Initiatives**

The prior sections provided an overview of how 6 states used their data resources to support opioid-related efforts in general. In this section, we will look more deeply at initiatives in 3 states. The first 2 initiatives address prescribing behavior of clinicians. In South Dakota, the state Medicaid agency worked with the medical societies and state health systems to implement new pharmacy policy around opioid prescribing. In Minnesota, the legislature created an Opioid Prescribing Improvement Project and an Opioid Prescribing Work Group that has designed and implemented several opioid prescribing projects.

The third initiative, in Tennessee, is a collaborative effort between Medicaid and the Medicaid MCOs to implement a comprehensive population health initiative with several opioid-related components for women of childbearing age.

### **South Dakota's Opioid Prescribing Initiative**

South Dakota Medicaid staff worked with the P&T committee; the state medical, dental and pharmacy associations; and the health systems operating in the state to implement opioid prescribing best practices. Their experience is an example of collaborative work in a state with a small, widely dispersed population to share best practices around opioid prescribing, begin to address high-dose opioid use, and implement patient tapering plans.

The initiative was launched after the state medical association successfully lobbied the legislature to prevent opioid prescribing guidelines to be codified in state law (South Dakota Medicaid staff, personal communication). Medicaid staff, in collaboration with their P&T committee members, saw an opportunity to improve opioid prescribing practices in the state through the creation of pharmacy edits in the POS system and voluntary adoption of best practices (South Dakota Medicaid staff, personal communication).

The P&T committee first reviewed the CDC opioid prescribing guidelines and guidelines published by the South Dakota State Medical Association (South Dakota Medicaid staff, personal communication).<sup>14</sup> Conversations took place during quarterly P&T meetings throughout 2016 and 2017 and led to the adoption of 5 strategies in December of 2017. The strategies were: (1) to support peer-to-peer communication about opioid prescribing, (2) to adopt morphine-equivalent dosage limits and encouraging tapering for patients on high dose opioids, (3) to adopt a limit on pill counts and morphine-equivalent dosage totals for patients determined to be opioid naïve through POS edits, (4) to require prior authorization for patients prescribed more

than one long-acting and short-acting opioid, and (5) to tighten opioid early refill limits (South Dakota Medicaid staff, personal communication).<sup>15</sup>

Because South Dakota Medicaid was in the process of updating its POS system during these conversations, outreach efforts began with initial peer-to-peer communication before the new edits were implemented (South Dakota Medicaid staff, personal communication). Using claims data, Medicaid staff identified the prescribers in the state with the highest rates of high-dose opioid prescribing and identified 10 Medicaid patients prescribed opioids exceeding a threshold of 300 MME (South Dakota Medicaid staff, personal communication). State Medicaid staff also queried the PDMP for identified patients and prescribers to ensure they had the most complete information on opioid prescriptions (South Dakota Medicaid staff, personal communication). Medicaid requested patient medical records for the 10 identified patients. The Medicaid medical director had phone conversations with the prescribers to discuss the patient's case and offer support for patient management and tapering plans (South Dakota Medicaid staff, personal communication).

At the same time, Medicaid policy and pharmacy staff contacted the chief medical officers for the major health systems operating in the state to inform them of the forthcoming Medicaid policy changes and enlist their support in implementing the changes (South Dakota Medicaid staff, personal communication). South Dakota's health ecosystem includes 3 large health systems that employ approximately 70% to 80% of the practicing physicians in the state, a large federally qualified health center (FQHC) network, and numerous Indian Health Service clinics (South Dakota Medicaid staff, personal communication). Medicaid staff reached out to the chief medical officers of these health systems and explained the upcoming policy changes (South Dakota Medicaid staff, personal communication). Many of the clinical directors requested data from Medicaid on the prescribing

patterns of their clinicians and information about individual patients whose therapy would be affected by the policy changes. The clinical directors then worked internally with their providers to explain the new policies and support clinicians working with individual patients (South Dakota Medicaid staff, personal communication). Medicaid staff believes the partnership with health system medical directors was a key factor ensuring clinician adherence to the new policies and helped both prescribers and patients adjust to the changes (South Dakota Medicaid staff, personal communication). The medical directors reported the Medicaid policy changes provided them an opportunity to address the opioid prescribing issue within their systems, which was something they had intended to do (South Dakota Medicaid staff, personal communication).

Medicaid staff collaborated with the state medical, dental, and pharmacy associations in drafting communications to providers about the new policy changes, which the associations shared through mailing lists and distribution channels (South Dakota Medicaid staff, personal communication). Based on feedback from the health system clinical directors, all communications had information about resources for SUD treatment including connections to MAT offered in office-based and SUD treatment

settings and also provided information about using the PDMP (South Dakota Medicaid staff, personal communication). Medicaid staff believed the cooperation of the medical, dental, and pharmacy associations greatly enhanced their ability to reach prescribers with information about the policy changes. Communications from the medical associations were more likely to reach prescribers rather than billing or administrative staff and were more likely to be read by practicing prescribers (South Dakota Medicaid staff, personal communication).

Medicaid staff also sent letters to patients whose prescriptions would be affected by the policy changes, with direction to speak to their physicians about their treatment (South Dakota Medicaid staff, personal communication). Copies of the letters were mailed to prescribers (South Dakota Medicaid staff, personal communication). Medicaid staff reported prescribers found these letters helpful as an opportunity to start what could be a difficult conversation with the patient, and helped them make the case that therapy changes were being adopted for the patient's safety and best interests (South Dakota Medicaid staff, personal communication).

Medicaid staff also worked closely with pharmacies in the state (South Dakota Medicaid staff, personal

**Table 2: Changes in South Dakota Medicaid Prescribing Practices**

Metric	First Quarter 2018	First Quarter 2019	Percentage Change
Average Enrolled Medicaid Population per month	118,509	116,723	↓1.5%
Total Opioid Claims	11,283	8,447	↓25%
Morphine-equivalent Dosage > 180	179	125	↓ 30%
Total Utilizers	3,835	3,253	↓ 15%
Poly Pharmacy Shoppers (3+ pharmacies)	137	56	↓ 59%
Poly Prescriber Shoppers (3+ prescribers)	399	169	↓ 57%
Patients Receiving MAT	223	436	↑51%

Source. South Dakota Medicaid staff, personal communication. Abbreviations. MAT: medication-assisted treatment; MED: morphine-equivalent dosage.<sup>16</sup>

communication). Medicaid staff sent quarterly bulletins to pharmacies alerting them in advance that the policy changes were coming and informing them every time the morphine-equivalent dosage limit was being reduced so pharmacies could work with patients and their prescribers to prepare for the change (South Dakota Medicaid staff, personal communication). Medicaid staff felt the regular, repeated communications with prescribers, health system executives, and pharmacists helped them successfully implement the program (South Dakota Medicaid staff, personal communication).

The pharmacy POS edits were implemented in the state in June 2018 (South Dakota Medicaid staff, personal communication). Medicaid tracked claims data and reported significant changes in prescribing practices from the first quarter of 2018 to the first quarter of 2019 as shown in Table 2.

### **Minnesota Opioid Prescribing Improvement Program**

In 2015, the Minnesota legislature directed the commissioner of the Department of Human Services (DHS) to create an [Opioid Prescribing Improvement Program](#) (OPIP) “to reduce opioid dependency and substance use by Minnesotans due to the prescribing of opioid analgesics by health care providers.”<sup>17</sup> The OPIP applies to all prescribers enrolled in Minnesota health care programs including Medicaid.<sup>18</sup> The statute directed the commissioner to convene an opioid prescribing work group charged with 4 tasks:

- Develop opioid prescribing guidelines for acute, subacute and chronic pain.
- Write and distribute educational materials for prescribers to use when communicating with patients about pain management and using opioids to treat pain.
- Design performance measures using administrative claims data to determine whether prescribers were in compliance with prescribing guidelines.

- Define thresholds based on the performance measures that, when crossed, would evoke either a quality improvement project requirement or, in extreme cases, disenrollment for opioid prescribers and prescriber groups from Medicaid provider eligibility.<sup>17</sup>

The [opioid prescribing work group](#) (OPWG) convened in November 2015 with 18 members from statutorily defined membership categories (e.g., prescribing physicians, pharmacists, consumer representatives), and met monthly throughout 2016 and 2017, completing prescribing guidelines and initial work on performance measures (Minnesota Medicaid staff, personal communication).<sup>19</sup> In October of 2017, the commissioner extended the work group’s mandate through December 2019 to finalize components of the quality improvement projects and develop thresholds to determine when a provider or provider group should be disenrolled from Minnesota health plans.<sup>20</sup> The disenrollment thresholds have not yet been established although DHS materials indicate factors such as time that the provider has been out of compliance and degree of improvement while participating in quality improvement projects will be taken into account.<sup>21</sup> Disenrollment is not expected to take place until 2021 at the earliest (Minnesota Medicaid staff, personal communication).<sup>21</sup>

The OPWG established 7 opioid prescribing measures, 5 of which have an established threshold that triggers a quality improvement requirement if exceeded (Minnesota Medicaid staff, personal communication). The performance measures are described in Table 3.

While the performance measures were being developed by the work group, DHS worked to develop a format for the prescriber reports (Minnesota Medicaid staff, personal communication). All clinicians who prescribed at least 1 outpatient opioid prescription to a Minnesota health care plan member in either fee for service or managed care were eligible to receive a report (Minnesota Medicaid staff, personal

**Table 3. Minnesota's Opioid Prescribing Performance Measures**

Measure Description	Numerator	Denominator	QI Threshold
Percentage of enrollees prescribed an index opioid prescription	Number of patients with one or more index opioid prescriptions prescribed in the measurement period	Distinct number of patients seen by the provider in the measurement period	Prescribing rate is > 8% (nonsurgical specialties only)
Percentage of index opioid prescriptions exceeding the recommended dose	Number of index opioid prescriptions exceeding 100 MME (medical specialty) or 200 MME (surgical specialty) prescribed in the measurement period	Number of index opioid prescriptions prescribed in the measurement period	Prescribing rate is > 50%
Percentage of prescriptions exceeding 700 cumulative MME in the post-acute pain phase	Number of prescriptions that cross the 700 cumulative MME threshold or exceed 700 cumulative MME prescribed in the measurement period	Number of opioid prescriptions prescribed during an initial opioid prescribing episode in the measurement period	Prescribing rate is > 15%
Percentage of patients with chronic opioid analgesic therapy (COAT)	Number of patients with a prescription during a COAT period ( $\geq 60$ consecutive days supply of opioids) during the measurement period <sup>b</sup>	Number of patients with at least 1 opioid prescription prescribed during the measurement period	No quality improvement threshold
Percentage of COAT enrollees exceeding 90 MME/day (high-dose COAT)	Number of patients prescribed COAT of > 90 MME/day in the measurement period <sup>c</sup>	Number of patients with a prescription during a COAT period during the measurement period <sup>b</sup>	Prescribing rate is > 10%
Percentage of enrollees receiving elevated dose COAT who receive a concomitant benzodiazepine	Number of patients prescribed COAT of > 50 MME/day and an overlapping benzodiazepine prescription > 7 days in the measurement period <sup>c</sup>	Number of patients with a prescription during a COAT period during the measurement period. <sup>b</sup>	Prescribing rate is 10%
Percentage of COAT patients receiving opioids from multiple prescribers	Number of patients on COAT who received opioids from 2+ additional providers while on COAT during the measurement period	Number of patients with a prescription during a COAT period during the measurement period <sup>b</sup>	No quality improvement threshold

Note. <sup>a</sup> Index opioid prescription defined as "the first opioid prescription in the measurement period after at least 90 days of opioid naïveté."<sup>20(p17)</sup>; <sup>b</sup> "Multiple prescribers can be attributed to a patient receiving COAT. For example, the patient may have received 30 days' supply from one prescriber and 30 days' supply from another prescriber. Both prescribers will have this patient in their patient counts."<sup>22(p2)</sup>; <sup>c</sup> "Patients are attributed to providers who prescribe more than a 28-day supply. All prescribed MME are included in the calculations for these measures, even if more than one provider prescribed opioids to the patient during the chronic period."<sup>22(p2)</sup> Source. Adapted from the Minnesota Department of Human Services provider letter.<sup>22</sup> Abbreviations. COAT: chronic opioid analgesic therapy; MME: milligram morphine equivalent.

communication).<sup>20</sup> Patients were excluded from the reports if they had a cancer diagnosis or cancer treatment in the measurement year, were receiving hospice or palliative care, or were receiving MAT for opioid use disorder (Minnesota Medicaid staff, personal communication).<sup>23</sup>

To determine peer comparators, DHS staff created a list of approximately 21 specialty groups for prescribers, using the National Plan and Provider Enumeration System database to identify each prescriber's NPI taxonomy code (Minnesota Medicaid staff, personal communication).<sup>23</sup> If NPI data were missing, DHS staff used Minnesota health plan provider enrollment data to place each prescriber into a peer-provider group (Minnesota Medicaid staff, personal communication).<sup>23</sup>

Each report includes the prescriber's score on all 7 performance measures, the average score on each measure for all providers in the prescriber's specialty group, and an indication of whether the prescriber has crossed the quality improvement threshold for the 5 measures with a threshold. Initial letters with baseline information were mailed during the summer of 2019 using 2018 prescribing data.<sup>23</sup> The 2019 reports were for informational purposes only and did not trigger any quality improvement requirements. In January of 2020, DHS sent the second letters to prescribing clinicians and DHS reported trends in opioid prescribing showed positive developments.<sup>24</sup> Comparing data from 2016 to September 2019 reports, prescribing practices on key measures dropped as shown in Table 4.

The third round of letters scheduled to be sent late in 2020 will be the first reports that may trigger quality improvement projects for prescribers who exceed the established thresholds on each metric (Minnesota Medicaid staff, personal communication).<sup>24</sup> In the future, reports will be issued to prescribers annually (Minnesota Medicaid staff, personal communication).

Minnesota DHS staff reported the OPWG addressed several challenges when developing the OPIP (Minnesota Medicaid staff, personal communication). First, staff found significant variation in prescribing practices between providers in the same specialty, indicating the importance of identifying and then educating outlying prescribers (Minnesota Medicaid staff, personal communication).<sup>20</sup> But it also points to the need to understand why some providers are outliers and why that might be justified (Minnesota Medicaid staff, personal communication).

For example, orthopedic surgeons who predominantly perform major joint replacement surgeries may prescribe more opioids at higher doses than their peers who treat more minor injuries (Minnesota Medicaid staff, personal communication).<sup>20</sup> The Minnesota OPWG is still working on processes to allow some prescribers to apply for a special cause exemption that will allow them to forgo the quality improvement project requirement (Minnesota Medicaid staff, personal communication).<sup>21</sup>

Second, the OPWG decided to include volume guidelines in the criteria that would trigger a quality

**Table 4: Changes in Minnesota Opioid Prescribing Measures 2016 to 2019**

Measure	Percentage Change
Percentage of enrollees prescribed an index opioid prescription	↓ 33%
Percentage of index opioid prescriptions exceeding the recommended dose	↓ 51%
Percentage of prescriptions exceeding 700 cumulative MME in the post-acute pain phase	↓ 56%
Percentage of COAT enrollees exceeding 90 MME/day (high-dose COAT)	↓ 54%
Percentage of enrollees receiving elevated dose COAT who receive a concomitant benzodiazepine	↓ 57%

Source. Adapted from the Minnesota Department of Human Services.<sup>24</sup> Abbreviations. COAT: chronic opioid analgesic therapy; MME: milligram morphine equivalent.



improvement project (Minnesota Medicaid staff, personal communication).<sup>21</sup> If a prescriber has written prescriptions over the threshold for only 1 or 2 patients, the quality improvement requirement will not be invoked (Minnesota Medicaid staff, personal communication). The work group has established volume thresholds for acute and subacute care, and is working on a volume threshold for patients on COAT (Minnesota Medicaid staff, personal communication). Third, the OPWG spent significant time considering the needs of chronic pain patients and patients with rare diseases who can experience extreme pain (Minnesota Medicaid staff, personal communication). DHS staff and work group members wanted to avoid an antagonistic relationship with clinicians, encourage patient-centered and individualized treatment decisions, and avoid patients losing access to care if clinicians decided to stop treating chronic pain patients (Minnesota Medicaid staff, personal communication). In December of 2019, DHS staff held a listening session with chronic pain patients and the work group continues to consider how to implement the OPIP requirements with these patients and clinicians (Minnesota Medicaid staff, personal communication).<sup>24</sup>

Finally, DHS staff reported significant challenges distributing the report cards to prescribers (Minnesota Medicaid staff, personal communication). The legislation creating the OPIP required DHS to distribute the report cards to the prescribers directly and DHS was not allowed to share the prescriber's information with their employer or affiliated health system unless the quality improvement project requirement was triggered (Minnesota Medicaid staff, personal communication). DHS staff found they did not have accurate mailing addresses for enrolled Medicaid providers, and the addresses they had were often for a billing or credentialing office and did not reach the clinicians directly (Minnesota Medicaid staff, personal communication). DHS staff tried to use Medicaid's electronic provider billing

and credentialing portal to distribute the reports, but found the system was not set up to communicate directly with clinicians (Minnesota Medicaid staff, personal communication). In retrospect, DHS staff felt distribution would have been made easier if they had been able to distribute the reports to a clinic, health system, or hospital with which the provider was affiliated, but doing so in Minnesota would have required that the option be in statute (Minnesota Medicaid staff, personal communication).

Minnesota DHS staff cited their collaborative work with the participants in the OPWG and their sister organizations as a key factor for project successes (Minnesota Medicaid staff, personal communication). Minnesota DHS staff partnered with the Institute for Clinical Systems Improvement, the Minnesota Hospital Association, the Minnesota Medical Association, and the University of Minnesota Academic Health Center to help disseminate the work of the OPWG including education about the prescriber report cards.<sup>20</sup>

DHS also contracted with the hospital association to include the opioid prescribing performance measures in the clinical workflows of member hospitals and to develop sample quality improvement plans.<sup>20</sup> According to DHS staff, this collaboration was essential in getting the OPIP legislation passed and in ensuring the program was designed and implemented well, allowing them to avoid unintended consequences (Minnesota Medicaid staff, personal communication).

While time and labor intensive, the OPWG led to enhanced collaboration between DHS and the provider community and avoided antagonism as all stakeholders were committed to achieving the OPIP's goals (Minnesota Medicaid staff, personal communication).

### ***Tennessee's Initiative to Improve Care for At-Risk Women of Childbearing Age***

Tennessee Medicaid (TennCare) has a number of opioid-related initiatives,<sup>25</sup> but for this report we focus on the partnership with its MCOs to use predictive

clinical risk stratification to increase outreach to women of childbearing age who use opioids.

As with many states, TennCare requires its MCOs to have a population health focus and to risk stratify its clinical patients (Tennessee Medicaid staff, personal communication). When TennCare staff looked at the MCOs' work on opioid-related issues, they realized the MCOs were primarily using medical claims data to perform risk stratification and had not consistently incorporated pharmacy data into its strategies (Tennessee Medicaid staff, personal communication).

In Tennessee, the pharmacy benefit is carved out to the state, but TennCare and its MCOs participate in a pharmacy collaborative work group to address pharmacy-related issues (Tennessee Medicaid staff, personal communication). TennCare staff and its MCOs agreed that the opioid epidemic was a clear opportunity to better use the pharmacy data for opioid-related population health initiatives. TennCare used its contractually required joint pharmacy services collaborative coordination work group to develop and implement a risk stratification program for women of childbearing age (aged 14 to 45) (Tennessee Medicaid staff, personal communication).

The first task of the work group was to develop a common understanding of data sources and data definitions (Tennessee Medicaid staff, personal communication). TennCare had secured access to medical and pharmacy claims, PDMP, and the work group developed common data definitions on opioid issues (e.g., definitions of overdose, acute use, chronic use, NAS) and created an opioid dashboard for internal policy development (Tennessee Medicaid staff, personal communication). Next the work group came up with a list of 15 rules-based predictive algorithms to stratify women of childbearing age into low-, medium-, or high-risk categories based on patient characteristics and then worked with the plans to develop interventions based on the risk categories (Tennessee Medicaid staff, personal communication).

For example:

- A woman aged 14 to 45 using prenatal vitamins and having an opioid prescription would stratify into a low-risk category and would be provided with educational materials about the risks of opioid use during pregnancy as well as information about contraception. This category was not deemed to be very useful by the MCOs and has been eliminated.
- A woman aged 14 to 45 on chronic opioid therapy who had 3 or more visits to the emergency department for pain-based diagnoses would be stratified into a higher risk category and contacted by the MCOs opioid-related care coordination program.
- A woman aged 14 to 45 who had a child with a diagnosis of NAS, had an opioid prescription and no history of contraception in the record would be stratified into a very high-risk category and would be contacted by the MCO opioid-related care coordination program and offered care coordination and education on women's health and pregnancy-related care including topics such as access to voluntary, long-acting, reversible contraception (e.g., intrauterine devices, contraceptive implants) (Tennessee Medicaid staff, personal communication).

The goal of the initiative was to catalyze rules-based risk stratification strategy that would allow the plans to match their population health outreach to the patient's level of risk and grow their care coordination strategy to better incorporate opioid risk. (Tennessee Medicaid staff, personal communication). TennCare staff reported the plans took the work seriously, continue to build on the initial framework, and want to improve upon it over time (Tennessee Medicaid staff, personal communication).

One key strategy the MCOs have adopted is contracting with 180 Health Partners, a Tennessee-based organization that manages the StrongWell

SUD care coordination program with specific options for women, men, and women during pregnancy and the postpartum period (Tennessee Medicaid staff, personal communication).<sup>26,27</sup> StrongWell helps mothers with substance use and exposure stay connected to treatment by providing wraparound services, care coordination, and peer support services, and supports mothers and infants for up to a year after delivery (Tennessee Medicaid staff, personal communication).<sup>26,27</sup>

TennCare staff reported the work on this initiative has shown clear benefits. They have seen numerous reports of pregnant women who were identified as opioid users based on PDMP or claims data who have now been enrolled in care coordination, are receiving treatment including MAT, and are transitioning to recovery services (Tennessee Medicaid staff, personal communication).

This initiative, in addition to other work TennCare and the state has done, has led to a change in NAS prevalence in Tennessee. The number of babies diagnosed with NAS in TennCare increased every year from 2011 to 2016 with the rate of NAS per 1,000 live births reaching 28.2 in 2016.<sup>28</sup> Over the last two years, TennCare has finally begun to see a reduction in the rate of NAS per 1,000 live births declining to 27.3 in 2017 and 24.6 in 2018.<sup>28</sup> This rate reduction represents an absolute number of 205 fewer infants born with a diagnosis of NAS in 2018 (Tennessee Medicaid staff, personal communication). The Tennessee Department of Health which tracks statewide NAS prevalence has also shown decreasing NAS rates over the past two years as well. (Tennessee Medicaid staff, personal communication).<sup>29</sup>

## Other Relevant Findings

Interviews with key informants identified several additional themes relevant to the findings in this report.

First, key informants acknowledged linking data sources was often a challenge, but the benefits to having a more complete picture of patient and prescriber behavior was useful for many reasons.

As noted previously, access to PDMP data for all Medicaid patients provided crucial information on Medicaid patient use of controlled substances not included in claims records (Tennessee Medicaid staff, personal communication). While Medicaid access to this data is controversial in some states, the experiences of Tennessee and Washington demonstrate the data can be used outside of law enforcement or regulatory purposes to improve quality of care and patient services (Medicaid staff: Tennessee, Washington, personal communication). Key informants also expressed an interest in having more access to clinical information such as the results of lab tests and care plans, or health care surveillance data (Medicaid staff: Nebraska, Washington, personal communication).

The Department of Health Services in Wisconsin created an integrated data warehouse with information about services provided by Medicaid, child welfare, long-term care, mental health, and substance use in a common enterprise data system (D. Webb, personal communication). The agency was able to create the system by allocating costs across programs and developing comprehensive data governance policies and processes that managed who could access the data and under what terms (D. Webb, personal communication).

Establishing a unique patient identification number would facilitate the creation of truly integrated data systems which, until recently, the U.S. Department of Health and Human Services (HHS) had been prohibited from pursuing due to a Congressional directive (D. Webb, personal communication). While legislation passed in 2019 in the House of Representatives would have allowed HHS to investigate creation of a unique patient ID system, the provision was not included in the Senate version (personal communication).<sup>30</sup> Language in the appropriations bill does direct the Office of the National Coordinator for Health IT to work with other federal agencies to explore ways to improve patient identification and matching and deliver a

report which may or may not include a recommended standard for a unique patient health identifier (D. Webb, personal communication).

Second, key informants emphasized the importance of having a common set of data definitions and a data dictionary so the multiple partners on opioid-related issues are working from a common understanding (Medicaid staff: Minnesota, Nebraska, Tennessee, Washington; P. Krupski, D. Webb, personal communication). Multiple states also reported creating opioid-related data dashboards that helped visualize data, track trends, and communicate with key stakeholders (Medicaid staff: Minnesota, Tennessee, Washington; P. Krupski, personal communication).

Third, both Tennessee and Washington Medicaid staff reported success partnering with MCOs on collaborative data projects and having the Medicaid data staff take the lead in explaining the data sources (Medicaid staff: Tennessee, Washington, personal communication). Helping the MCOs develop use cases and programs based on data analysis was more productive than leaving the MCOs to conduct the work on their own (Medicaid staff: Tennessee, Washington, personal communication). Both Tennessee and Washington had invested resources and hired staff specifically to support data initiatives, which allowed the states to provide support to MCOs and other partners (Medicaid staff: Tennessee, Washington, personal communication).

## DISCUSSION

This report reviewed how state Medicaid programs use data to address problematic provider and patient opioid-related behavior in general, and described specific programs in South Dakota, Minnesota, and Tennessee. States continue to rely primarily on medical and pharmacy paid claims and managed care encounter data in their analytical work, but some states have been able to gain access to additional data sources such as PDMP or ADT data sets.

State governments in general have been increasingly interested in improving their access and use of data in policy formation and policy evaluation processes, and opioid-related work has been a focus.<sup>31</sup> Some of the challenges states have experienced—lack of real-time data; data elements in separate systems without linkages; and limited resources for data collection, analysis, and governance—are true for Medicaid as well, and programs may benefit from statewide efforts to improve data analysis capabilities.<sup>31</sup>

One challenge state Medicaid programs face is differing state or federal restrictions on use of data or differing interpretations of these rules, which shapes the nature of data projects. As noted in this report, Washington State was statutorily granted access to batch PDMP when the program was created, while Tennessee Medicaid staff were able to negotiate with their Department of Health colleagues to access batch PDMP data. Having access to batch PDMP data provides for a more complete understanding of Medicaid beneficiary use of prescribed controlled substances and can help inform care coordination or other patient intervention programs.

The states that did not have such access were still able to design and implement opioid-related data programs. South Dakota Medicaid staff used their authority to query the PDMP about specific patients to assist in their opioid prescribing project. Minnesota Medicaid program staff, who have no access to PDMP data, were still able to design and implement a far-reaching opioid prescribing improvement program. Inclusion of PDMP, ADT, or HIE data could have changed how Minnesota structured the provider-specific performance metrics, but the Minnesota example demonstrates that states can proceed with opioid-data interventions using claims data only.

States also had differing interpretations of how ADT data could be used to intervene with patients seen for an opioid-related event outside of a SUD treatment facility, given the patient privacy rules

stipulated in 42 CFR Part 2. Washington and Nebraska allow clinicians to be alerted if their patient was treated for a substance-related condition such as an overdose, but Tennessee's legal counsel advised notification of such events was limited to MCO staff, not the patient's clinicians.

Recently there have been proposed changes to these rules because 42 CFR Part 2 was implemented before the advent of electronic health records, and treatment for SUD was primarily delivered in stand-alone facilities.<sup>13,32</sup> The Department of Health and Human Services proposed amendments to these rules in August of 2019, noting that treatment of behavioral health conditions is increasingly taking place in primary care settings and the opioid crisis has emphasized the need to further care coordination among providers included in the treatment of SUD.<sup>32</sup>

HHS developed a useful fact sheet about the proposed changes and reason for the changes.<sup>33</sup> One of the reasons is to facilitate coordination of care activities.<sup>33</sup> If these rules are adopted as proposed, it may be easier for states to implement initiatives involving the sharing of SUD treatment data for care coordination. The comment period on the proposed rules closed October 25, 2019, and the department has not stated when the rules might be finalized.<sup>34</sup>

Connecting datasets can be a challenging process for states as programs are limited by different data sharing and regulatory rules. Working with legal staff is essential to this process. The initiative in Tennessee described in this report could be used by MED states to help articulate goals, develop internal use cases, demonstrate value and return-on-investment, and provide succinct rationale for how integrated data can be used in opioid-related quality programs while adhering to federal rules. Being able to describe the value and goals is important when working with agencies, providers, advocates, and legal staff to obtain access to data. Key informants also emphasized the need to develop shared data definitions, a data dictionary, and clear data governance structures.

Key informants in this report also discussed challenges in communicating with providers about policy changes and distributing feedback in the form of prescriber report cards. South Dakota reported a successful collaboration with its medical, dental, and pharmacy associations, which worked jointly to draft provider communications. The materials were distributed through the associations' communication channels. States might also consider whether data systems such as HIEs can be used as a means for provider communications.

Our research for this report identified several potential subjects for future investigation or continued surveillance. First, this report focused on the use of data to identify and address problematic provider and patient opioid behaviors, but the key informants reported their opioid-related work had been shifting away from a concentrated focus on prescribing behavior to access to and quality of SUD treatment (Medicaid staff: Washington, Tennessee; P. Krupski; personal communication).

For example, Washington Medicaid staff have created a dashboard that monitors data related to MAT for opioid use disorder and supports the ACH's work to coordinate services in their regions (Washington Medicaid staff, personal communications). The dashboard shows ACH staff if there has been a sudden decline in MAT services, which may indicate a clinician has stopped providing MAT services and may need support to resume prescribing. Similarly, if treatment duration is below best practice standards, it may indicate a need to provide education to either patients or clinicians (Washington Medicaid staff, personal communication).

Wisconsin's state opioid coordinator is using data from Medicaid and other sources to determine where to place services for a planned hub-and-spoke SUD treatment program (P. Krupski, personal communication).

Tennessee has developed metrics for measuring MAT services and plan to report these to providers (Tennessee Medicaid staff, personal communication).

Second, Nebraska Medicaid's access to HIE and PDMP data is relatively new and Medicaid staff are still exploring how they will use these data sources (Nebraska Medicaid staff, personal communication). Nebraska's HIE is unusual as it is specifically designed as a public health utility with a mission of supporting health IT for all providers, health systems, and payers in the state (J. Bland, personal communication).

The HIE plans to serve as the continuous medical record for all Nebraskans, which will allow Medicaid and other payers to understand a patient's medical history across time and changes in insurance coverage (J. Bland, personal communication). Among other benefits, having a longitudinal medical record will help Medicaid avoid duplication of services (e.g.,

paying for a mammogram or other screening for a newly enrolled Medicaid patient who has already received the service within the past 2 years through a different payer) and will allow providers and payers to better coordinate care for clients whom states sometimes have difficulty tracking, such as foster children (J. Bland, personal communication).<sup>35</sup>

Nebraska Medicaid will need some time to develop and evaluate how a fully integrated data system with access to labs and all Medicaid billed and nonbilled claims can best be utilized for quality improvement, but the experience may provide important lessons for states that wish to advocate for improved data-sharing systems.

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# APPENDIX A. METHODS

## Search Strategy

We conducted a search of Medicaid Evidence-based Decisions Project (MED) policy sources to identify relevant policy briefs, national policy summaries, laws, regulations, and guidance using the terms **Medicaid, data, opioids, PDMPs, claims, drug utilization review**. Additionally, we conducted a Google search using the terms **Medicaid, data, opioids**, and reviewed key sources from reference lists. For state-specific policy, we searched state websites, provider manuals, and relevant laws and regulations for Minnesota, Nebraska, South Dakota, Tennessee, Washington, and Wisconsin.

## Policy Sources Searched

- Centers for Medicare & Medicaid Services
- Congress.gov
- Federal Register
- Medicaid and CHIP Payment and Access Commission (MACPAC)
- National Academy for State Health Policy
- National Association of State Medicaid Directors
- Office of Inspector General, U.S. Department of Health and Human Services
- Office of the National Coordinator for Health Information Technology
- Prescription Drug Monitoring Program Training and Technical Assistance Center, Brandeis University
- United States Code of Federal Regulations
- United States Department of Health and Human Services
- United States Government Accountability Office (GAO)

## Methods for Key Informant Interviews

We interviewed Medicaid officials in Minnesota, Nebraska, South Dakota, and Tennessee and 3 additional policy experts. The additional experts were

the former Chief Information Officer for Wisconsin Medicaid, the Director of Opioid Initiatives for the State of Wisconsin, the Executive Director of the Nebraska HIE, and the Center's Pharmacy Director.

Interviews were scheduled for 1 hour and were recorded and transcribed by the lead author. Key informants were provided with a list of questions before the interview (see below) and were provided an opportunity to review sections of the report that referenced their interviews for accuracy.

## Interview Questions

The purpose of this report is to document innovative strategies Medicaid programs employ to use data to identify and manage patients and providers with problematic opioid behavior. Although the report focuses on opioids, we are also interested in other types of prescribed drugs that may be associated with problematic behaviors, such as benzodiazepines.

States have multiple potential data sources to track these types of prescribed drugs: prescription drug monitoring programs (PDMPs), health information exchanges (HIE), drug utilization review boards (DUR) and claims or encounter data, either Medicaid specific data or all payer all claims (APAC) data bases.

1. What data system(s) do you use to identify patients or providers with problematic opioid behavior?
2. What are the specific patient or prescriber behaviors you are trying to identify?
3. How do you use the data to identify individual patients or providers exhibiting a behavior you would like to change?
4. Once you identify a patient or provider with a behavior you would like to change, what do you do?
5. What are the advantages and disadvantages of the system you use? What does your initiative do well? What do you wish you could do that you can't?
6. Do you have any evaluation of your initiative to see whether you are having your intended effect?

7. Does Medicaid participate in statewide data analysis efforts? If so, are those data efforts used by Medicaid program staff in any way?
8. What advice or lessons learned would you like to share with your colleagues?

## Interview Contacts

### Minnesota

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Minnesota Department of Human Services  
October 22, 2019

Mary Beth Reinke  
Drug Utilization Review Coordinator  
Pharmacy Unit  
Minnesota Department of Human Services  
October 22, 2019

Sarah Rinn  
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Minnesota Department of Human Services  
October 22, 2019

Mary Wigland  
Pharmacy Student  
Minnesota Department of Human Services  
October 22, 2019

### Nebraska

Carisa Schweitzer Masek  
Deputy Director Population Health  
Nebraska Department of Health and Human Services  
December 13, 2019

Leah Spencer  
Program Specialist, Pharmacy  
Nebraska Department of Health and Human Services  
December 13, 2019

Jamie Bland  
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January 7, 2020

### South Dakota

Sarah Aker  
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January 9, 2020

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January 9, 2020

### Tennessee

David Collier  
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TennCare  
December 23, 2019

Victor Wu  
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December 23, 2019

### Washington

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December 18, 2019

Arsheena Hussein  
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December 18, 2019

### Wisconsin

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## ***Subject Matter Expert***

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December 19, 2019

### About the Center for Evidence-based Policy

The Center for Evidence-based Policy (Center) is recognized as a national leader in evidence-based decision making and policy design. The Center understands the needs of policymakers and supports public organizations by providing reliable information to guide decisions, maximize existing resources, improve health outcomes, and reduce unnecessary costs. The Center specializes in ensuring that diverse and relevant perspectives are considered and appropriate resources are leveraged to strategically address complex policy issues with high-quality evidence and collaboration. The Center is based at Oregon Health & Science University in Portland, Oregon. Further information about the Center is available at <http://centerforevidencebasedpolicy.org/>

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