HHS-OIG Data Snapshot

National Review of Opioid Prescribing in Medicaid Is Not Yet Possible

OEI-05-18-00480
August 2019

What OIG Did

Historically, national Medicaid data—a collection of data submitted by all States—have not been complete, accurate, and timely. These data have not yet been adequate for national analysis and oversight, even though some States' data have been sufficient for individual State analysis.[1] Because of concerns with the quality and completeness of the national Medicaid claims database—the Transformed Medicaid Statistical Information System (T-MSIS)—we assessed the completeness of variables needed to monitor national opioid prescribing in Medicaid. We assessed variables needed to identify (1) beneficiaries at risk of opioid misuse or overdose (i.e., variables needed to calculate beneficiaries' total opioid dosage, and diagnosis codes to exclude patients for whom higher doses of opioids may be appropriate) and (2) the National Provider Identifiers (NPIs) of providers that ordered and dispensed opioids (i.e., prescribers and pharmacies, respectively).

Key Takeaway

A national review of opioid prescribing in Medicaid using T-MSIS is not yet possible because not all at-risk beneficiaries and providers can be identified.

Results

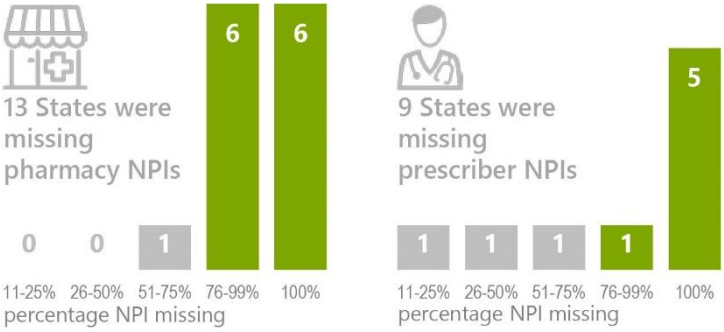
Limitations of T-MSIS data impede identification of individual beneficiaries for national opioid analysis.

A given Medicaid beneficiary can have multiple IDs within a State (e.g., if he/she disenrolled and later re-enrolled) and across States. (Because Medicaid IDs are assigned at the State level, a beneficiary gets a new ID if he/she moves to another State.) If a beneficiary has multiple IDs, the prescriptions dispensed to those IDs would erroneously appear to be for multiple people, not one person. As a result, beneficiaries' total opioid dosages would be undercounted.

Thirty-two States were missing NPI, diagnosis code, or quantity.

NOTE: Five States were missing **NPI** AND **diagnosis code**.
Source: OIG analysis of T-MSIS data, 2019.

Nineteen States were missing pharmacy or prescriber NPI—most frequently, pharmacy NPI.



NOTE: Three States were missing both types of **NPI**s.
Source: OIG analysis of T-MSIS data, 2019.

Examples of reasons States were missing data:

- Did not require **NPI** to be collected
- Have **NPI** in their State data but (1) submit it to the wrong field or file in T-MSIS or (2) are not able to transmit it to T-MSIS because they are operating with an outdated system
- Do not report **diagnosis codes** for all services even though the variable is required

Why This Matters

Until T-MSIS data are complete in all States and limitations across States are addressed, it will not be possible to conduct a national evaluation of Medicaid beneficiaries at risk of opioid misuse or overdose. According to CMS, Medicaid covered over 31 million prescriptions for opioids in 2017.[2]

The data we reviewed are critical for nationally quantifying the opioid crisis's impact on Medicaid and for monitoring the crisis, as well as for conducting general program integrity efforts across States.

- Without a **unique beneficiary ID**, it is not possible to identify all at-risk beneficiaries in need of opioid-related treatment and to take appropriate action, or to monitor utilization of services to protect beneficiaries from poorly coordinated care.
- Without a **provider NPI**, it is not possible to identify all providers who may be overprescribing opioids and take appropriate action, or to identify providers for investigations of fraud, waste, or abuse.
- Without a **diagnosis code**, it is not possible to exclude all patients with cancer diagnoses for whom higher doses of opioids may be appropriate, or to identify patients' medical conditions to determine medical necessity for services.

In August 2018, the Centers for Medicare & Medicaid Services (CMS) announced that all States were submitting T-MSIS data, that CMS was prioritizing T-MSIS data quality, and that CMS would have research-ready files available in 2019.[3] Since then, CMS has been working with States to improve the quality of their data submissions, so some States' data may have improved since we pulled our data in December 2018. Also, in May 2019, CMS added three of the variables we reviewed—diagnosis code, drug quantity, and pharmacy NPI—to its priorities for data quality.[4]

What OIG Recommends

To ensure the identification of at-risk beneficiaries and providers who may be overprescribing, CMS should:

Work to ensure that individual beneficiaries can be uniquely identified at a national level using T-MSIS

CMS should work with States to address instances in which a single beneficiary has more than one Medicaid ID within a State. Additionally, CMS should work to ensure that in cases in which a beneficiary was enrolled in more than one State over time, claims for individual beneficiaries can be linked across States.

CMS concurred with this recommendation and will implement a process to enable IDs to be linked. CMS will also issue guidance to States on assignment and coding of unique IDs, and to data users on identification of individual beneficiaries at the national level.

Ensure the correct submission of prescriber NPIs

CMS should prioritize State reporting of prescriber NPIs. CMS recently prioritized completeness of *pharmacy* NPIs, but not that of *prescriber* NPIs.

CMS concurred with this recommendation and will prioritize completeness of prescriber NPIs.

Clarify requirements for diagnosis codes

CMS should issue guidance to clarify which services require a diagnosis code. CMS recently prioritized completeness of diagnosis codes, but some States are unsure whether a diagnosis code is required for all services.

CMS concurred with this recommendation and will revise guidance to clarify requirements.

Data: Percentage missing for each variable, by State

	State	Missing Data	Prescription Information				Provider NPIs		Diagnosis Codes		
			Beneficiary ID*	Days Supply	NDC	Quantity Dispensed	Prescriber NPI	Pharmacy NPI	Primary Diagnosis Code	Primary Diagnosis Code	Primary Diagnosis Code
				Pharmacy File	Pharmacy File	Pharmacy File	Pharmacy File	Pharmacy File	Other File	Long Term Care File	Inpatient File
1	AR	x	0%	0%	2%	0%	0%	78%	2%	0.01%	0%
2	CA	x	0%	0%	0.10%	0%	2%	100%	16%	0.95%	3%
3	CT	x	0%	0%	0%	0%	0%	0%	26%	1%	0.34%
4	DC	x	0%	0%	0%	0%	62%	66%	10%	1%	2%
5	FL	x	0%	0%	6%	0%	100%	10%	11%	4%	0%
6	GA	x	0%	0%	0%	0%	0.19%	0.48%	11%	0%	0%
7	ID	x	0%	0%	0%	5%	0%	100%	0.36%	0.47%	0.98%
8	IL	x	0%	4%	0%	0%	4%	2%	15%	10%	0%
9	KS	x	0%	0%	0.05%	0%	0%	0%	26%	18%	17%
10	ME	x	0%	0%	0%	0%	100%	0%	2%	0%	0%
11	MI	x	0%	5%	0.07%	0.01%	7%	95%	8%	0%	0%
12	MO	x	0%	0%	0%	0%	84%	84%	8%	0%	0%
13	MS	x	0%	0%	0%	0%	100%	2%	63%	0.04%	0.47%
14	MT	x	0%	0%	0%	0%	100%	100%	9%	0%	0%
15	NC	x	0.07%	0.01%	0.01%	100%	0.07%	0%	9%	0%	0%
16	ND	x	0%	0%	0%	0%	1%	0%	28%	5%	0%
17	NH	x	0%	0%	0%	0%	2%	3%	5%	47%	0%
18	NJ	x	0.01%	6%	6%	0%	6%	98%	11%	0%	0%
19	NM	x	0%	0%	0%	0%	0%	100%	9%	0%	0%
20	NV	x	0%	0%	0.01%	0%	36%	0.49%	2%	0%	0%
21	NY	x	0%	5%	0.03%	0%	0.05%	93%	5%	0%	0%
22	OH	x	0%	0%	0%	0%	11%	10%	7%	0%	0%
23	OR	x	0%	0%	0%	0%	2%	0.12%	16%	0%	0%
24	RI	x	0%	0%	0.01%	0%	100%	0%	7%	0%	4%
25	SC	x	0%	0%	0.15%	0%	0%	0%	11%	100%	8%
26	SD	x	0%	0%	0%	0%	0%	0%	12%	0.02%	0%
27	TN	x	0.10%	0%	0.60%	0%	0%	100%	7%	0%	0%
28	TX	x	0.01%	0%	0%	0%	0%	0%	22%	22%	0%
29	UT	x	0%	0%	0%	0%	0%	0%	53%	0.56%	0%
30	VT	x	0%	0%	0%	0%	0%	100%	5%	0%	0%
31	WA	x	0%	0%	0%	0%	2%	90%	45%	0%	0%
32	WY	x	0%	0%	0%	0%	2%	0%	11%	0%	0%
33	AK		0%	0%	0%	0%	1%	0%	9%	0%	0%
34	AL		0%	0%	0.05%	0%	0.01%	0.03%	10%	0.04%	0.14%
35	AZ		0%	0%	0%	0%	0.03%	0%	6%	0%	0%
36	DE		0%	0%	0%	0%	0%	0%	6%	0%	0%
37	HI		0%	0%	0%	0%	0%	0%	9%	0%	0%
38	IA		0%	0%	0%	0%	0%	0%	6%	1%	0%
39	IN		0%	0%	0%	0%	0%	0%	7%	0%	0%
40	KY		0%	0%	0.28%	0%	0%	0.25%	9%	0%	0%
41	LA		0%	0%	0%	0%	0%	0%	6%	0.10%	0%
42	MA		0%	0%	0.07%	0%	5%	0.35%	7%	0%	0%
43	MD		0%	0.26%	0.37%	0%	0.26%	0.02%	7%	0.02%	0%
44	MN		0.01%	0%	0%	0%	0.60%	0%	4%	4%	0%
45	NE		0%	0%	0%	0%	0%	0.59%	8%	0%	0%
46	OK		0%	0%	0.06%	0%	0.01%	0%	9%	4%	0.01%
47	PA		0%	0%	0%	0%	0%	0%	8%	0%	0%
48	VA		0%	0%	0%	0%	0.01%	0%	4%	0%	0%
49	WV		0%	0%	0%	0%	5%	0.01%	4%	0%	0%
50	CO		Not submitting data at time of our review period								
51	WI		Not submitting data at time of our review period								

NOTE: Cells highlighted in **blue** indicate variables for which 100 percent of the corresponding data were missing. Cells highlighted in **gray** indicate variables for which the percentage of corresponding data missing was greater than 10 percent but less than 100 percent.

*We averaged the percentage missing for beneficiary ID across all claims files.

Source: OIG analysis of T-MSIS data, 2019.

Methodology

We assessed the completeness of the T-MSIS variables that would be needed to monitor national opioid prescribing in Medicaid: prescription information, provider NPIs, and diagnosis codes.

- We did not assess the completeness of the 46 variables that can be used to identify hospice care.
- Review period: We reviewed the December 2018 data for claims with dates of service between January 2017 and March 2018.
- We categorized variables as "missing" in a State if the corresponding data fields were blank for more than 10 percent of the State's claims in our review period.
- We excluded certain claims:
    - denied claims,
    - financial transactions (i.e., capitation payment, supplemental payment, and service tracking claims), and
    - claims in which the variables we selected were not required (e.g., we excluded claims that do not require a diagnosis code, such as claims for durable medical equipment, laboratory services, and transportation services)
- We conducted interviews about missing data with 10 States' Medicaid officials and T-MSIS staff to find out why they were missing data.

Standards

We conducted this study in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

Acknowledgments

Hilary Slover served as the team leader for this study, and Joy Rooney served as the lead analyst. Others in the Office of Evaluation and Inspections who conducted the study include Nicole Hrycyk and Lisa Minich. Office of Evaluation and Inspections staff who provided support include: Clarence Arnold, Randi Hall, Althea Hosein, Kevin Manley, Christine Moritz, Kayla Phelps, and Keirsha Thompson. We would also like to acknowledge the contributions of other OIG staff, including Mandy Brooks and Jessica Swanstrom. This report was prepared under the direction of Thomas Komaniecki, Regional Inspector General for Evaluation and Inspections in the Chicago regional office, and Laura T. Kordish and Kelly Waldhoff, Deputy Regional Inspectors General.

To obtain additional information concerning this report or to obtain copies, contact the Office of Public Affairs at Public.Affairs@oig.hhs.gov.

Sources

[1] OIG, *Opioids in Ohio Medicaid: Review of Extreme Use and Prescribing*, OEI-05-18-00010, July 2018; OIG, *Status Update: T-MSIS Data Not Yet Available for Overseeing Medicaid*, OEI-05-15-00050, June 2017; OIG, *Early Outcomes Show Limited Progress for the Transformed Medicaid Statistical Information System*, OEI-05-12-00610, September 2013; OIG, *MSIS Data Usefulness for Detecting Fraud, Waste, and Abuse*, OEI-04-07-00240, August 2009.

[2] CMS, *Medicaid Opioid Prescribing Mapping Tool*, April 23, 2019. Accessed at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/OpioidMap_Medicaid_State.html on June 14, 2019.

[3] CMS, *State Health Official letter SHO # 18-008*, August 10, 2018. Accessed at https://www.medicaid.gov/Federal-Policy-Guidance/downloads/SHO18008.pdf on February 5, 2019.

[4] CMS, *CMS Guidance: Overview of Data Quality Top Priority Items*, May 2019. Accessed at https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/tmsis-blog/?entry=51423 on May 21, 2019.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Medicare & Medicaid Services

Administrator
Washington, DC 20201

DATE: AUG -1 2019

TO: Joanne M. Chiedi
Acting Inspector General
Office of Inspector General

FROM: Kim Brandt
Principal Deputy Administrator
Centers for Medicare & Medicaid Services

SUBJECT: Office of Inspector General Draft Report: "*National Review of Opioid Prescribing in Medicaid Is Not Yet Possible*" (OEI-05-18-00480)

The Centers for Medicare & Medicaid Services (CMS) appreciates the opportunity to review and comment on the Office of Inspector General (OIG) draft report on the completeness of variables in the Transformed Medicaid Statistical Information System (T-MSIS) that can be used to analyze opioid prescribing in Medicaid.

CMS is responding to the opioid epidemic by promoting safe and responsible pain management, making sure patients can access treatment for opioid use disorder, and using data to target prevention and treatment. CMS firmly believes that high-quality T-MSIS data is essential to ensure robust monitoring and oversight of opioid prescribing in Medicaid, and CMS is committed to collaborating with states to improve their data submissions.

Beginning in July 2017, CMS identified 12 top priority items for T-MSIS data quality, and states have made significant progress addressing these items. In 2019, CMS expanded its top priority items to include additional focus areas, including three of the variables OIG reviewed: diagnosis code, drug quantity, and pharmacy National Provider Identifier (NPI). CMS has also taken steps to ensure that individual Medicaid beneficiaries can be uniquely identified at a national level. While T-MSIS places responsibility on each state to assign and maintain unique, unchanging, and permanent beneficiary identifiers to every Medicaid eligible person, states sometimes reassign beneficiary identifiers, for example, when changing from one eligibility system to another. Therefore, CMS is developing a process that will enable T-MSIS data users to link related identifiers to one another. Finally, CMS is currently revising the T-MSIS data dictionary documentation guidance to clarify the requirements for what services require diagnosis codes, among other improvements.

CMS has provided technical assistance to the states on T-MSIS data submissions since 2018 on topics such as how to accurately report demographics data and how to accurately report all diagnosis codes as reported on the claims. CMS expects states to make steady progress in improving the quality of their data submissions, and will continue to work with states to support their efforts.

OIG's recommendations and CMS's responses are below.

OIG Recommendation

CMS should work to ensure that individual beneficiaries can be uniquely identified at a national level using T-MSIS.

CMS Response

CMS concurs with this recommendation. As stated above, CMS is implementing a process that will enable T-MSIS data users to link related identifiers to one another so that beneficiaries can be uniquely identified. In addition, CMS will provide guidance to states regarding assignment and coding of unique beneficiary identifiers, as well as guidance to data users on how to use T-MSIS data to identify individual beneficiaries at the national level.

OIG Recommendation

CMS should ensure the correct submission of prescriber NPIs.

CMS Response

CMS concurs with this recommendation. CMS is currently tracking the degree to which the prescribing NPI field is not populated, and plans to implement an edit to check NPI accuracy against the National Plan and Provider Enumeration System. In addition, CMS plans to add prescriber NPI completeness to the top priority items for T-MSIS data quality in the future.

OIG Recommendation

CMS should clarify requirements for diagnosis codes.

CMS Response

CMS concurs with this recommendation. CMS is currently revising the T-MSIS data dictionary documentation guidance to clarify the requirements for what services require diagnosis codes, among other improvements.