

DEPARTMENT OF HEALTH & HUMAN SERVICES
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State Demonstrations Group

June 3, 2026

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Dear Director Gold:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the Summative Evaluation Report, which is required by the Special Terms and Conditions (STCs), specifically STC #42 “Summative Evaluation Report” of the section 1115 demonstration, “Healthy Louisiana Opioid Use Disorder/Substance Use Disorder” (Project No: 11-W-00311/6). The demonstration period was approved on February 1, 2018 and effective through December 31, 2022. This Summative Evaluation Report covers the period from February 1, 2018 through December 31, 2022. CMS determined that the Evaluation Report, submitted on June 28, 2024 and revised on April 17, 2026, is in alignment with the CMS-approved Evaluation Design and the requirements set forth in the STCs, and therefore, approves the state’s Summative Evaluation Report.

The Summative Evaluation Report is largely aligned with the approved Evaluation Design and uses a mixed-methods approach, including an interrupted time series (ITS) quasi-experimental design, surveys, and key informant interviews to assess outcomes. Positive findings include a decrease in emergency department visits for SUD among Medicaid beneficiaries from about three visits per 1,000 beneficiaries in early 2019 to two per 1,000 by the end of 2022. Inpatient stays for SUD followed a similar pattern, increasing prior to the demonstration period and declining after 2019. The number of SUD providers grew from approximately 2,800 before the demonstration period to about 5,000 by the end of the demonstration period, although growth slowed following the onset of the COVID-19 pandemic. The number of Medicaid beneficiaries diagnosed with SUD increased from 64,260 at the start of the demonstration period to more than 86,000 by the end of 2022, while the percentage of beneficiaries with SUD remained relatively stable, increasing only 4.7% from 2019 to 2022, suggesting that higher SUD counts were largely driven by overall Medicaid enrollment growth. Readmission rates for SUD treatment remained higher than pre-demonstration period levels but increased at a much slower rate than before (0.0001 vs. 0.0016). Although overdose death rates more than doubled by the end of the demonstration period, the state notes that this trend was influenced by the effects of COVID-19 and the growing prevalence of fentanyl. Despite the impacts of COVID-19 and data limitations

that prevented some planned analyses, including difference-in-differences, the state used rigorous quantitative methods and incorporated additional models to account for trend changes associated with the onset of the COVID-19 pandemic.

In accordance with STC #44, the approved Summative Evaluation Report may now be posted to the state's Medicaid website within 30 days. CMS will also post the Summative Evaluation Report on Medicaid.gov.

States are responsible for following all applicable federal law and regulations when they claim and use federal Medicaid funds and must fully comply with all applicable Medicaid statutes and regulations under a section 1115 demonstration, except where specific provisions have been expressly waived or identified as not applicable for that demonstration. This obligation includes all requirements in Title XIX of the Social Security Act and implementing regulations governing provider screening and enrollment activities, pre- and post-payment review claiming, payment methodologies and rate-setting, utilization controls, and program integrity including processes to identify, investigate, and refer suspected fraud, and methods to receive complaints and identify questionable practices. States must maintain effective systems and safeguards to prevent, detect, and address any fraud, waste, or abuse (FWA) in the delivery of and payment for Medicaid services, including referrals to law enforcement when appropriate.

States should have heightened monitoring and oversight mechanisms in place featuring robust internal controls to identify and remediate all vulnerabilities (including, but not limited to, FWA and beneficiary access issues) inherent in service areas approved as part of a demonstration. At any time, CMS may request that the state provide a plan detailing the state's systems and safeguards to prevent, detect, and address any FWA relative to this demonstration. Failure to meet program integrity obligations under federal statutes and regulations or under the terms and conditions of this demonstration approval may result in compliance actions or other enforcement measures that could include requirements to develop and implement corrective action plans, withholdings, deferrals, disallowances, and termination of demonstration authority.

We look forward to our continued partnership on the Healthy Louisiana Opioid Use Disorder/Substance Use Disorder section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

cc: Cecilia Williams, State Monitoring Lead, CMS Medicaid and CHIP Operations Group



TULANE UNIVERSITY
SCHOOL *of* PUBLIC HEALTH
& TROPICAL MEDICINE

Department of Health Policy and Management

Evaluation of the State of Louisiana Substance Use Disorder Section 1115 Demonstration

Summative Report

May 2025

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Executive Summary

Louisiana, like the rest of the United States, has experienced an opioid use disorder (OUD) epidemic, contributing to high rates of drug overdose deaths. In the midst of this crisis, the 2016 Medicaid and CHIP Managed Care Final Rule limited federal matching funds for in lieu of services delivered in institutions for mental diseases (IMD) to 15 days per month. In response to these developments, the Louisiana Department of Health (LDH) received approval of a Section 1115(a) Demonstration for February 2018 through December 2022 to allow for the continuation of treatment for OUD/SUD in IMDs regardless of the length of stay. In addition, the waiver included several other proposed interventions aimed at improving outcomes for Louisiana Medicaid members with an OUD/SUD in areas such as access to critical levels of care for OUD/SUD, the use of evidence-based SUD patient placement criteria, access to medication-assisted treatment (MAT), and care coordination and transition between levels of OUD/SUD care.

The Centers for Medicare and Medicaid Services (CMS) requires an external evaluation of the Healthy Louisiana Substance Use Disorder 1115 Demonstration, and the Tulane University Department of Health Policy and Management received the contract to conduct the evaluation. This document reports the findings from the initial five-year demonstration period.

Evaluation Questions and Hypotheses

The Tulane evaluation team developed the following evaluation questions and hypotheses that were used to track progress over the demonstration period. Each evaluation question was tied to a set of demonstration goals, which were then linked to demonstration-related interventions (see Figure 1 below). Progress toward demonstration goals was measured using the Medicaid Section 1115 Substance Use Disorder Demonstration Monitoring Metrics developed by CMS in partnership with Mathematica.

Evaluation Question 1: Did access to evidence-based OUD/SUD care increase as a result of the demonstration?
Demonstration Goal 1.1: Increase access to evidence-based OUD/SUD care. <i>Evaluation Hypothesis: The demonstration will increase the share of beneficiaries who are treated for OUD/SUD in ways that are consistent with evidence-based care.</i>
Demonstration Goal 1.2: Increase access to and utilization of medication-assisted treatment (MAT) for OUD/Alcohol Use Disorder (AUD). <i>Evaluation Hypothesis: The demonstration will increase the use of MAT.</i>
Demonstration Goal 1.3: Ensure sufficient provider capacity at each level of care for OUD/SUD. <i>Evaluation Hypothesis: The demonstration will improve provider capacity.</i>
Evaluation Question 2: Did use of medically-inappropriate care including emergency department and hospital care for OUD/SUD decline as a result of the demonstration?
Demonstration Goal 2.1: Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for OUD/SUD treatment.

<i>Evaluation Hypothesis: The demonstration will reduce visits to the emergency department and the use of hospital services for the treatment of OUD/SUD.</i>
Demonstration Goal 2.2: Reduce readmission rates for OUD/SUD treatment. <i>Evaluation Hypothesis: The demonstration will reduce hospital readmission rates for OUD/SUD.</i>
Demonstration Goal 2.3: Increase use of evidence-based OUD/SUD patient placement criteria. <i>Evaluation Hypothesis: The demonstration will increase the use of evidence-based OUD/SUD patient placement criteria.</i>
Evaluation Question 3: Did care-coordination improve as a result of the demonstration?
Demonstration Goal 3.1: Increase initiation and follow-up after discharge from the emergency department or hospital for OUD/SUD. <i>Evaluation Hypothesis: The demonstration will increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD.</i>
Demonstration Goal 3.2: Increase adherence to and retention in treatment. <i>Evaluation Hypothesis: The demonstration will increase adherence to and retention in treatment.</i>
Evaluation Question 4: Did health outcomes for Medicaid beneficiaries with OUD/SUD improve as a result of the demonstration?
Demonstration Goal 4.1: Reduce instances of drug overdose and overdose deaths. <i>Evaluation Hypothesis: The demonstration will decrease the rate of drug overdose and the number of drug deaths.</i>

To provide additional context and insight into the mechanisms driving the quantitative findings, we administered a care coordination survey to SUD treatment facilities in Louisiana and conducted key informant interviews with SUD treatment providers and local health officials. Notable themes emerged from these qualitative analyses including a belief among key informants that MAT access had improved over the demonstration period, however several barriers to the widespread adoption of MAT remained. We discuss examples of these barriers in the full report below.

Another concern expressed by providers was the challenge of maintaining care coordination in the event of a natural disaster. For example, Hurricane Laura, a category 4 hurricane, struck southwest Louisiana in August 2020 and led to substantial disruptions for Medicaid SUD members seeking care. According to informant interviews, when possible, displaced patients were referred to other providers. However, some were lost to follow-up, with one health official estimating that they had lost contact with 200 patients after Hurricane Laura.

Evaluation Methods

We used an interrupted time series (ITS) methodology to track changes in the demonstration goals over the evaluation period. The ITS design estimates linear approximations of the pre-period and post-period trends in each monitoring metric, measures any discontinuous level change at the time of the intervention, and estimates any post-to-pre period trend change. It is this trend change that is our primary measure of the association between the demonstration waiver and changes in the demonstration goals. The primary data source for our analyses was

Medicaid claims data provided by LDH. Data on overdose deaths were collected from the LDH Office of the State Registrar and Vital Records.

We also conducted a qualitative analysis that included surveying SUD treatment facilities in Louisiana and conducting key informant interviews with providers and local health officials.

Results

Substance Use Disorder among Louisiana Medicaid Members

The share of Louisiana Medicaid members with a diagnosed substance use disorder was growing from mid-2017 through the first year of the demonstration period. However, beginning in early 2019, the growth rate in SUD share leveled off and remained flat through the end of 2022. As a result, approximately 4.7 percent of Louisiana Medicaid members had a diagnosed SUD in 2019 and that number largely remained stable through 2022. While there was not necessarily a reduction in SUD share associated with the demonstration waiver, the fact that the share of Louisiana Medicaid members with an SUD held steady through the COVID-19 pandemic is notable.

Unfortunately, despite the stabilization in the SUD share, the number of drug overdose deaths per 1,000 Louisiana Medicaid members nearly doubled over the demonstration period with an especially large jump from the pre-to-post-COVID period. Because this increase in overdose deaths was not met with an increase in SUD diagnoses, we suspect that this was likely due to the proliferation of fentanyl over the demonstration period, which has contributed to a growing number of opioid-related overdose deaths (CDC, 2024).

Goal 1.1: Increase access to evidence-based OUD/SUD care.

Both the share of Louisiana Medicaid members with an SUD treated in an IMD and the average length of an IMD stay increased with the implementation of the waiver demonstration. Fewer than 2 percent of Medicaid members with an SUD diagnosis were treated in an IMD through the latter half of 2017 (prior to the demonstration waiver). That number increased by approximately two-thirds of a percentage point (37 percent) with the introduction of the demonstration waiver and remained elevated throughout the demonstration period. Similarly, the length of stay for a Medicaid member with an SUD treated in an IMD averaged 10 days in the pre-demonstration period, but was approaching 15 days by the end of 2022.

The share of Medicaid members using outpatient services for SUD (ASAM Level 1), including outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients increased significantly over the demonstration period. Fewer than 10 percent of SUD members were using ASAM Level 1 services prior to the demonstration period, but that share had increased to more than 15 percent by the end of 2022.

The share of Medicaid members with an SUD diagnosis using intensive outpatient SUD services (ASAM Level 2.1) increased slightly over the demonstration period, though this increase was much more modest than the increase observed for ASAM Level 1 services.

ASAM Level 3 service use followed a pattern similar to the observed change in ASAM Level 1 service use. The share of Medicaid members using residential or inpatient SUD services was declining slightly prior to the implementation of the demonstration waiver, but increased in the post-demonstration period. By the end of 2022, residential or inpatient SUD service use had increased by nearly 20 percent relative to 2017.

Finally, the share of Medicaid members engaging in withdrawal management services for SUD, including outpatient, inpatient, or residential services, increased slightly over the demonstration period. Fewer than 1 percent of Medicaid SUD members were using withdrawal management services in a given month prior to the demonstration and that number had increased to just above 1 percent by the end of 2022. There was a small, but noticeable, temporary increase in withdrawal management service use coinciding with the COVID-19 pandemic.

Goal 1.2: Increase access to and utilization of medication-assisted treatment (MAT) for OUD/Alcohol Use Disorder (AUD).

Medication-assisted treatment (MAT) use for Louisiana Medicaid members increased dramatically over the demonstration period. Approximately 8 percent of Medicaid members with an SUD had a claim for MAT in a given month in late 2017, but by the end of 2022, that share had increased to nearly 17 percent. Methadone was notably added to the Medicaid program in January 2020 as an authorized medication for OUD treatment provided by the Opioid Treatment Programs (OTPs). COVID-related policy changes relaxed restrictions on MAT prescribing through telemedicine, some of which were maintained in the post-COVID period.

The Office of Behavioral Health (OBH) implemented workforce development initiatives to provide training and education on MAT to physicians and clinicians statewide. Particularly, Louisiana implemented the Extension for Community Health Outcomes (ECHO) Project, which is a virtual online professional development series for educators, University Fellow Programs, physicians, clinicians, BH providers, and private practitioners. OBH also worked to expand access to MAT via multiple grant awards, targeting expansion of evidence-based treatment for persons with OUD by implementing a Hub and Spoke model.

The number of providers per 1,000 Louisiana Medicaid SUD members who were enrolled in Medicaid, were qualified to deliver SUD services, and who met the standards to provide buprenorphine or methadone as part of MAT has increased over the demonstration period, though the rate of increase was similar in the pre-demonstration and post-demonstration periods. In mid-2017, there were approximately 6 MAT providers for every 1,000 Medicaid members with an SUD and that number had increased to nearly 10 by the end of 2022.

Goal 1.3: Ensure sufficient provider capacity at each level of care for OUD/SUD.

The number of providers who were enrolled in Medicaid and qualified to deliver SUD services also increased over the demonstration period, though the rate of that increase has slowed since 2019. Together with the increase in MAT providers, these capacity improvements explain the increased MAT use and access to evidence-based OUD/SUD care among Louisiana Medicaid members.

Goal 2.1: Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for OUD/SUD treatment.

The number of emergency department (ED) visits for SUD per 1,000 Medicaid members increased slightly from 2017 through 2018 before beginning to trend downward with the MCO update to their specialized behavioral health network development and management plan in early 2019 that required plans to include information on MAT providers. Medicaid members averaged approximately 3 ED visits for SUD per 1,000 members in early 2019, but that number had fallen to 2 visits per 1,000 members by the end of 2022.

Inpatient stays for SUD per 1,000 Medicaid members followed a similar pattern over the demonstration, increasing in the pre-demonstration period and falling post-2019. There were approximately 2 SUD inpatient stays per 1,000 Medicaid members per month in early 2019 and that number increased slightly with the COVID-19 pandemic. However, SUD inpatient stays began to decline in mid-2020 and were at their lowest post-demonstration level by the end of 2022.

Goal 2.2: Reduce readmission rates for OUD/SUD treatment.

Rates of all-cause hospital readmissions among Medicaid members with an SUD diagnosis were rising through early 2019 before levelling off following the MCO update. While it does not appear that the demonstration was associated with reduced readmission rates compared to the pre-demonstration period, the demonstration was associated with a reduction in the growth rate of readmission for Medicaid members with an SUD diagnosis.

A notable shortcoming of the metrics used to track demonstration goals 2.1 and 2.2 is that ED visits, inpatient stays, and readmission monitoring metrics include any instance where an SUD diagnosis was included on the claim, regardless of whether SUD was the primary diagnosis. As a result, it is indeterminable if the utilization tracked in these metrics was directly related to SUD.

Goal 3.1: Increase follow-up after discharge from the emergency department or hospital for OUD/SUD.

We measured progress toward this goal by tracking the percentage of ED visits for beneficiaries aged 18 and older with a principal diagnosis of AOD abuse or dependence who had a follow-up visit for AOD abuse or dependence within 7 and within 30 days of the ED visit (Monitoring metric #17). Results indicate improvements in 7- and 30-day follow-up after an ED visit associated with the addition of SUD-specific audit tool elements to the MCO monitoring tool in early 2019.

Goal 3.2: Increase adherence to and retention in treatment.

For goal 3.2, we first tracked the share of Louisiana Medicaid members age 18 and older with a new episode of alcohol abuse or dependence, opioid abuse or dependence, or other drug use or dependence who initiated treatment within 14 days of the diagnosis. All three measures exhibited a general increase over the demonstration period following the implementation of an MCO performance improvement project (PIP) starting in 2019. Initiation rates for alcohol and other drug use or dependence grew at a slower rate, while the growth rate for OUD treatment initiation was constant over the entire demonstration period.

Next, we tracked treatment engagement measured as the share of Louisiana Medicaid members age 18 and older with a new episode of alcohol abuse or dependence, opioid abuse or dependence, or other drug use or dependence who initiated treatment *and* who experienced at least 3 visits within 34 days of the initiation visits. Again, all three measures increased over the demonstration period, though we observed no significant trend change associated with the MCO PIP.

When considering improvements to initiation and engagement in alcohol or SUD treatment associated with the demonstration, it is worth noting that Louisiana Medicaid has some of the highest treatment initiation and engagement rates in the country. For example, 2022 SUD initiation and engagement rates in Louisiana Medicaid were above the 95th and 90th NCQA QC percentiles, respectively.

Goal 4.1: Reduce instances of drug overdose and overdose deaths.

Drug overdose deaths among adult Medicaid members in Louisiana increased dramatically over the demonstration period. However, the increase was largely driven by a spike in deaths that coincided with the onset of the COVID-19 pandemic in early 2020. This combined with the increasing proliferation and lethality of fentanyl were likely responsible for driving the increase in overdose deaths among Louisiana Medicaid members. Overdose deaths appear to have peaked in late 2021 and have generally trended downward through 2022, perhaps indicating an eventual return to pre-pandemic levels.

Conclusion

The majority of the monitoring metrics that we analyzed over Louisiana's SUD 1115 Demonstration Waiver period indicate improvement in SUD-related outcomes for Louisiana Medicaid members. While not all demonstration goals were met over the initial waiver period (see drug overdose deaths, for example), the improvements that we document in this report indicate significant progress in promoting SUD treatment and extending access to evidence-based care for Louisiana Medicaid members with an SUD.

Though data and methodological shortcomings prevent us from definitively establishing causality, observed trends are consistent with positive impacts of the demonstration waiver on outcomes for Medicaid members in Louisiana. Continued efforts to refine and expand demonstration-related initiatives, combined with robust data collection and analysis, are essential

components to sustaining and building upon the positive trends that have emerged over the demonstration period.

Introduction

Since 2012, Louisiana had been able to include coverage of IMD provided services under the Louisiana Behavioral Health Partnership (LBHP) and, later, Healthy Louisiana program, since coverage was determined to be “cost-effective” and capitated by the Louisiana Department of Health (LDH). In 2016, the Centers for Medicare and Medicaid Services (CMS) revised regulations and changed capitation policies prohibiting coverage (federal participation in coverage) for IMD stays beyond 15 days per month.

In response to the growing concern over rates of opioid use disorders (OUDs) and substance use disorders (SUDs) and to maintain a complete SUD continuum of care, the Louisiana Department of Health (LDH) applied for a Section 1115(a) Demonstration waiver in 2017 to allow for the continuation of treatment for OUD/SUD in institutions for mental diseases (IMDs) regardless of the length of stay.^{1,2} In addition, the waiver included several other proposed interventions aimed at improving outcomes for those with an OUD/SUD in areas such as access to critical levels of care for OUD/SUD, the use of evidence-based SUD patient placement criteria, access to medication-assisted treatment (MAT), and care coordination and transition between levels of OUD/SUD care. The Healthy Louisiana Substance Use Disorder 1115 Demonstration was approved by CMS on February 1, 2018 and continued through December 31, 2022. The scope of the demonstration required no change in Medicaid eligibility; therefore, the affected population included Medicaid beneficiaries in the state of Louisiana who were treated for an OUD/SUD.

The purpose of the demonstration was to maintain critical access to OUD/SUD services and continue delivery system improvements to provide more coordinated and comprehensive treatment for Medicaid beneficiaries. The demonstration aims to achieve the following goals:

- a. Increase access to evidence-based OUD/SUD care
- b. Increase access to and utilization of medication-assisted treatment (MAT) for OUD/SUD
- c. Ensure sufficient provider capacity at each level of care for OUD/SUD
- d. Decrease use of medically inappropriate care and reduced reliance on emergency department and hospital services for OUD/SUD treatment
- e. Reduce readmission rates for OUD/SUD treatment
- f. Increase use of evidence-based OUD/SUD patient placement criteria
- g. Increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD
- h. Increase adherence to and retention in treatment
- i. Reduce instances of drug overdose and overdose deaths

¹ Section 1905 42 of U.S.C. 1396d defines IMDs as “a hospital, nursing facility, or other institution of more than 16 beds, that is primarily engaged in providing diagnosis, treatment, or care of persons with mental diseases, including medical attention, nursing care, and related services.”

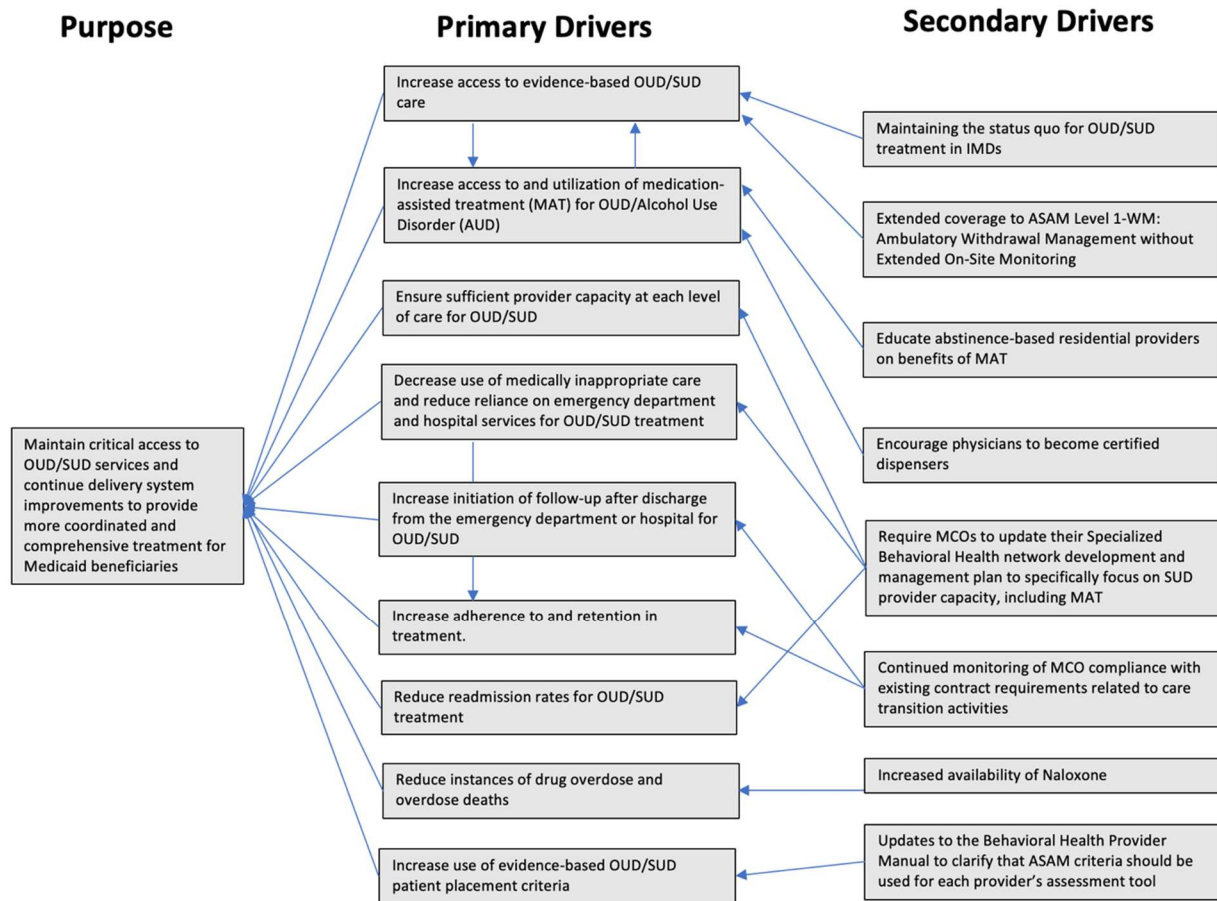
² While IMDs have been excluded from federal financial participation since Medicaid’s inception, several states have used an “in lieu of” policy to fund IMD care using federal dollars through capitated payments to managed care organizations (Musumeci, 2018). In May 2016, CMS implemented a policy to limit “in lieu of” payments to IMD stays to 15 days in a calendar month (Priest et al., 2017)

The demonstration implementation plan included six separate milestones that addressed various areas of OUD/SUD treatment including access, placement, standards of care, and provider capacity. The evaluation team developed hypotheses surrounding these milestones and their potential impact on the demonstration goals and then leveraged Louisiana Medicaid claims data, surveys, and key stakeholder interviews to analyze the impact of the demonstration. This document summarizes the findings from the first five years of Louisiana's SUD Demonstration and assesses the progress made towards achieving the established milestones.

Evaluation Questions and Hypotheses

Driver Diagram and Model Assumptions

Figure 1: Driver diagram



Model Assumptions:

1. Medicaid beneficiaries cannot afford treatment.
2. Providers will read the Louisiana Medicaid Provider manual.
3. Abstinence-only providers will read or participate in education.
4. Cost is a major barrier to evidence-based treatment for providers.
5. Knowledge is a major barrier preventing providers from engaging in evidence-based treatment.
6. Providers will comply with the requirement.
7. MCOs' contract requirements related to linkages to care are appropriate.
8. There is a process in place by which tracking data for opioids and naloxone is acted upon.
9. Community-based services are effective.

Table 1: Evaluation questions, demonstration goals, and evaluation hypotheses.

Evaluation Question 1: Did access to evidence-based OUD/SUD care increase as a result of the demonstration?
Demonstration Goal 1.1: Increase access to evidence-based OUD/SUD care. <i>Evaluation Hypothesis: The demonstration will increase the share of beneficiaries who are treated for OUD/SUD in ways that are consistent with evidence-based care.</i>
Demonstration Goal 1.2: Increase access to and utilization of medication-assisted treatment (MAT) for OUD/Alcohol Use Disorder (AUD). <i>Evaluation Hypothesis: The demonstration will increase the use of MAT.</i>
Demonstration Goal 1.3: Ensure sufficient provider capacity at each level of care for OUD/SUD. <i>Evaluation Hypothesis: The demonstration will improve provider capacity.</i>
Evaluation Question 2: Did use of medically-inappropriate care including emergency department and hospital care for OUD/SUD decline as a result of the demonstration?
Demonstration Goal 2.1: Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for OUD/SUD treatment. <i>Evaluation Hypothesis: The demonstration will reduce visits to the emergency department and the use of hospital services for the treatment of OUD/SUD.</i>
Demonstration Goal 2.2: Reduce readmission rates for OUD/SUD treatment. <i>Evaluation Hypothesis: The demonstration will reduce hospital readmission rates for OUD/SUD.</i>
Demonstration Goal 2.3: Increase use of evidence-based OUD/SUD patient placement criteria. <i>Evaluation Hypothesis: The demonstration will increase the use of evidence-based OUD/SUD patient placement criteria.</i>
Evaluation Question 3: Did care-coordination improve as a result of the demonstration?
Demonstration Goal 3.1: Increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD. <i>Evaluation Hypothesis: The demonstration will increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD.</i>
Demonstration Goal 3.2: Increase adherence to and retention in treatment. <i>Evaluation Hypothesis: The demonstration will increase adherence to and retention in treatment.</i>
Evaluation Question 4: Did health outcomes for Medicaid beneficiaries with OUD/SUD improve as a result of the demonstration?
Demonstration Goal 4.1: Reduce instances of drug overdose and overdose deaths. <i>Evaluation Hypothesis: The demonstration will decrease the rate of drug overdose and the number of drug deaths.</i>

Methods

Analytic Methods: Quantitative

We used an interrupted time series (ITS) methodology to evaluate the hypotheses listed in Table 1. The ITS method allowed us to examine changes over time in an outcome and generated effect estimates associated with trend breaks (i.e., level changes) and trend patterns (i.e., slope changes) in the data. The evaluation period spanned up to one year before and five years during the demonstration waiver to capture changes that corresponded to the timing of demonstration-related initiatives. An ITS analysis does not require a control group, but instead compares changes within the treatment group over time. A major limitation of the ITS method is that the absence of a control group can make it difficult to distinguish between demonstration effects and unrelated concurrent changes that may also impact outcomes (e.g., COVID-19).

Target Populations

The data cleaning process filtered out individuals with only partial Medicaid benefits, based on Medicaid enrollment Aid Categories, so those individuals were not part of the claim/encounter data pull population when the individual was not eligible to receive services defined in the metric numerator. The data cleaning process also excluded individuals with services covered by private insurance based on records of Medicaid claim payment from other payers. Claim/encounter records with a denied status in the state's adjudication system were excluded from the data pull.

When an original accepted claim/encounter was later adjusted or voided, the state's database still included the original and the replacement records; the cleaning process included accessing a cross-reference table to remove the originals for records that had been adjusted or voided and to return the final adjudicated claim.

To ensure proper inclusion for the reporting period, the data process included searching claim/encounter records for an additional future month beyond the reporting period to account for ongoing stays that actually discharged in the month following the reporting period; records that discharged in the reporting period were included in the report data, and records that discharged before or after the reporting period were not included in the report data.

The state's database is organized in monthly tables for both Medicaid eligibility and claim/encounter records, the data pull logic gathered records for metric reporting one month at a time; Medicaid beneficiaries and their associated claim/encounter records were included in reporting when they had at least one month of eligibility enrollment and/or claim/encounter records, as specified per metric definition, during the reporting period.

Finally, when examining overdose deaths, our target population was comprised of those whose cause of death was listed as unintentional drug poisonings, suicidal drug poisonings, homicide drug poisonings, or drug poisonings of undetermined intent.

Evaluation Period

The evaluation period for analyses using the Medicaid claims data began in January 2017 and was ongoing through the end of the demonstration period in December 2022. Though the demonstration was approved in February 2018, we incorporated data from 2017 in order to establish trends and use-rates in the pre-demonstration period. We then measured changes in outcomes from the pre-demonstration to post-demonstration periods.

Data Sources

The primary data source for our analysis was the Louisiana Medicaid claims database. Data on overdose deaths was provided by the LDH Office of the State Registrar and Vital Records.

Interrupted Times Series Model

Our primary methodology for evaluating demonstration hypotheses was interrupted time series (ITS) analysis. The ITS model can be described as follows:

$$Outcome_t = \beta_0 + \beta_1 Time_t + \beta_2 Implement_t + \beta_3 Time_t \times Implement_t + \varepsilon_t$$

Where *Time* is a continuous measure of time (*t*) denoted in either year, year-quarter, or month depending on sample sizes. *Implement* is an indicator for the implementation of a demonstration milestone meant to impact the outcome in question such that β_2 measures any break in trend associated with the intervention. While we report coefficient estimates for this trend break term, we would not typically expect level changes corresponding with the introduction of a demonstration milestone. Therefore, our focus is on changes in trends from the pre-implementation period to the post-implementation period. The term, $Time_t \times Implement_t$, represents an interaction between the continuous measure of time and the indicator for milestone implementation and the coefficient β_3 captures any change to the slope of the trend that occurred after the intervention. The ε_t term represents the model error and captures unobserved factors related to each demonstration outcome metric.

Analytic Methods: Qualitative

Care Coordination Survey

The care coordination survey is designed to be a rapid assessment of the ways in which the facility coordinated post-discharge services for inpatients. It covered the types of services coordinated, preauthorization, methods of referral, and patient information transfer.

The sampling frame from this survey was a list of 70 SUD treatment facilities obtained from the SAMHSA website. Facilities classified as inpatient providers that accepted Medicaid. A researcher attempted to reach each facility by telephone to invite them to respond to the survey.

2019 data collection

Of the 70 facilities listed, 22 reported that they provided outpatient care only. Additionally, two were duplicate listings and one reported to not accept Medicaid. Of the remaining 55 facilities, eight completed the survey. The 47 that did not either could not be reached, did not connect the researcher with an appropriate administrator who could respond, or refused.

The facilities that responded to the survey were located in New Orleans (3), Baton Rouge (2), North/Central Louisiana (2), and Southwest Louisiana (1).

2020 data collection

Of the 55 facilities identified as eligible in the first wave of data collection, 10 responded to the survey. The responding facilities were located in New Orleans (4), North/Central Louisiana (2), Southwest Louisiana (2), Baton Rouge (1), and Southeast Louisiana (1).

2021 data collection

In 2021, researchers attempted to reach facilities by telephone as well as a mailed or emailed survey with an option to take the survey online. Eight facilities responded to the survey. The responding facilities were located in New Orleans (3), Southwest Louisiana (2), Baton Rouge (1), North Louisiana (1), and Southeast Louisiana (1).

We assessed statistical significance between survey waves using a t-test.

Key Informant Interviews

Key informant interviews with SUD treatment providers and local health officials were conducted. Discussions focused on informants' perceptions of the SUD care landscape in Louisiana, including access to SUD treatment, care coordination, and barriers and facilitators to MAT use. Representatives from all parish health departments in the state were sent an initial and a follow-up invitation to be interviewed, and a total of four agreed to be interviewed. Physicians were also invited by email, with three participating in interviews. One subject was both an active physician and a parish health official. One outreach worker was recommended by another informant and was subsequently interviewed.

Interviews were recorded and transcribed. Data was coded and summarized using themes based on the research questions as well as emerging themes that occurred.

Analytic Methods: Cost of the Louisiana SUD Demonstration Waiver to the Medicaid Program

Identify Medicaid beneficiaries with a SUD

Using files obtained from Louisiana Medicaid data warehouse, including inpatient, outpatient, pharmacy, and long-term care claims, we identify beneficiaries with a substance use diagnosis or treatment code during the pre- and post-demonstration periods. We link beneficiaries with a SUD diagnosis or treatment during the specified time periods to Medicaid eligibility data and

demographic characteristics, to identify the months a beneficiary was enrolled in Medicaid. The analysis includes the first month where a SUD diagnosis or treatment claim was observed for the beneficiary and for up to eleven additional months that did not include claims for SUD diagnosis or treatment if the beneficiary remained enrolled in Medicaid. Repeated SUD diagnoses or treatment claims extend the observation period included in the analysis.

Organize the Data

Create a file with an observation for each month a beneficiary is Medicaid-eligible, on or after their first observed SUD-related claim during the demonstration period. For each month that an individual is enrolled, the data file contains an observation with their Medicaid costs in that month.

Develop Shadow Cost Prices

As Louisiana Medicaid patients are in managed care, we use the published specialized behavioral health fee schedule for Louisiana’s Medicaid program. This list maps Current Procedural Terminology (CPT) codes and provider types onto dollar costs. Additionally, there are Healthcare Common Procedure Coding System (HCPCS) codes that define daily charges for SUD IMD stays and these rates are specific to SUD patients. Per guidance from CMS, we exclude room and board from these shadow prices.

Waiver Administrative Costs

The costs for administering Louisiana’s SUD 1115 waiver program are entirely staffing costs. There are 10 staff members involved in administering the waiver program. We ask each staff member to estimate the percentage of their effort spent on administering the SUD waiver, percentage of time spent supporting the waiver evaluation efforts, and percentage of time spent on other duties. This retrospective reporting is performed monthly. We multiply the percentage efforts spent directly on administering the waiver by salaries to obtain administrative costs for the waiver program.

Calculate and Trend Average Monthly Spending

From the individual month-level data, we calculate average costs, across the categories presented in Table 2, separated into months before the demonstration and months after. These means are plotted to show trends visually and to verify that month-to-month variation is within expectations and does not indicate an underlying data error.

Table 2: Types of costs and data sources

Level of analysis	Type of costs	Data source
Total costs	Total costs	Louisiana Medicaid Claims Data, IMD costs, administrative costs
	Total federal costs	Total Medicaid costs * federal medical assistance percentage [FMAP] for the state

Level of analysis	Type of costs	Data source
SUD cost drivers*	SUD-IMD	IMD costs reported by Louisiana Medicaid Claims Data
	SUD-other	Louisiana Medicaid Claims Data
Type or source of care cost drivers*	Non-SUD	Louisiana Medicaid Claims Data
	Outpatient costs – non ED	Louisiana Medicaid Claims Data
	Outpatient costs – ED	
	Inpatient costs	
	Pharmacy costs	
	Long-term care costs	

Our model for identifying the impact of the SUD 1115 waiver program on costs is an interrupted time-series design without a comparison group. This is necessary as there is no geographic or eligibility variation in the Louisiana Medicaid population in who is eligible for these services. We use the ITS analysis detailed in the quantitative methods section for analyzing costs of the Louisiana SUD demonstration waiver to the Medicaid program.

Summary of Evaluation Measures

Table 3: Evaluation questions, demonstration goals, and evaluation hypotheses.

Evaluation Question 1: Did access to evidence-based OUD/SUD care increase as a result of the demonstration?						
Demonstration Goal 1.1: Increase access to evidence-based OUD/SUD care.						
Evaluation Hypothesis: The demonstration will increase the share of beneficiaries who are treated for OUD/SUD in ways that are consistent with evidence-based care.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Increase access to evidence-based OUD/SUD care)	Share of beneficiaries with an OUD/SUD treated in an IMD	2017-2023	Extensive Margin: Number of unduplicated beneficiaries enrolled in a reporting month (year) with a claim that uses an SUD diagnosis code as the primary diagnosis from an IMD billing provider	Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an SUD diagnosis code as the primary diagnosis	Louisiana Medicaid Claims Data	Analysis method changed from DD to ITS
	Average LOS for beneficiaries with an OUD/SUD treated in an IMD		Intensive Margin: Average LOS for beneficiaries treated in an IMD	Condition on unduplicated beneficiaries enrolled in a reporting month (year) with a claim that uses an SUD diagnosis code as the primary diagnosis from an IMD billing provider		
Secondary Drivers (Maintaining the status quo for OUD/SUD treatment in IMDs; Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended On-Site Monitoring)	Share of beneficiaries with an OUD/SUD receiving ASAM care at various levels.	2017-2023	Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted ASAM claim at each ASAM level	Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an SUD diagnosis code as the primary diagnosis	Louisiana Medicaid Claims Data	Analysis method changed from Pre/Post to ITS

Demonstration Goal 1.2: Increase access to and utilization of medication-assisted treatment (MAT) for OUD/Alcohol Use Disorder (AUD). Evaluation Hypothesis: The demonstration will increase the use of MAT.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Increase access to and utilization of medication-assisted treatment (MAT) for OUD/Alcohol Use Disorder (AUD))	Share of those with an OUD/AUD diagnoses who are treated using MAT	2017-2023	Number of unduplicated Medicaid beneficiaries enrolled in a reporting month (year) with a claim that uses an OUD/AUD diagnoses code as the primary diagnosis for Buprenorphine, Suboxone, Bunavail, Zubsolv, Probuphine, Naltrexone, Vivitrol, Disulfiram, or Acamprosate.	Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an OUD/AUD diagnosis code as the primary diagnosis	Louisiana Medicaid Claims data	Analysis method changed from ITS & DD to ITS
					Key informant interviews with residential providers	Thematic analysis of qualitative data
Secondary Drivers (Educate abstinence-based residential providers on benefits of MAT; Encourage physicians to become certified dispensers)	Number of providers who are certified to prescribe or dispense buprenorphine per 100,000 state residents.	2017-2023	Number of waived physicians	State population divided by 100,000.	SAMHSA Buprenorphine Treatment Practitioner Locator; Number of DATA-Certified Physicians	Outcome changed to number of providers enrolled in Medicaid and qualified to deliver SUD services per 1,000 beneficiaries with an SUD Data source changed to Louisiana Medicaid Claims data Analysis method changed from DD to ITS
			Number of waived physicians with paid/accepted MAT prescription claims that use an SUD diagnosis	N/A	SAMHSA and Louisiana Medicaid Claims data	Outcome changed to number of providers enrolled in Medicaid and qualified to deliver

			code as the primary diagnosis for more than 2 unduplicated beneficiaries in a reporting month (year)			<p>SUD services who meet the standards to provide buprenorphine or methadone as part of MAT per 1,000 beneficiaries with an SUD</p> <p>Data source changed to Louisiana Medicaid Claims data</p> <p>Analysis method changed from DD to ITS</p>
					Key informant interviews with physicians	Thematic analysis of qualitative data

Demonstration Goal 1.3: Ensure sufficient provider capacity at each level of care for OUD/SUD. Evaluation Hypothesis: The demonstration will improve provider capacity.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Ensure sufficient provider capacity at each level of care for OUD/SUD)	Total number of SUD providers	2017-2023	Number of Unduplicated NPI provider records with active enrollment for SUD services during reporting year	N/A	Louisiana Medicaid Claims data	None
Secondary Driver (Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT)	SUD providers per SUD beneficiary			Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an SUD diagnosis code as the primary diagnosis		
	SUD providers per SUD beneficiary by ASAM level of care		Number of Unduplicated NPI provider records with active enrollment for SUD services during reporting year by ASAM level of care	Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an SUD diagnosis code as the primary diagnosis		

Evaluation Question 2: Did use of medically-inappropriate care including emergency department and hospital care for OUD/SUD decline as a result of the demonstration?						
Demonstration Goal 2.1: Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for OUD/SUD treatment.						
Evaluation Hypothesis: The demonstration will reduce visits to the emergency department and the use of hospital services for the treatment of OUD/SUD.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for OUD/SUD treatment)	Emergency department visits for OUD/SUD	2017-2023	Number of unduplicated beneficiaries enrolled in a reporting month (year) with a claim that uses an SUD diagnosis code as the primary diagnosis with HCPCS/Procedure Codes 99281, 99282, 99283, 99284, 99285 or place of service 23 (ER-Hospital)	N/A	Louisiana Medicaid Claims data	Analysis method changed from DD to ITS
Secondary Driver (Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT)	Inpatient admissions for OUD/SUD		Number of unduplicated beneficiaries enrolled in a reporting month (year) with admit date for inpatient services billed from a Mental Health Free-Standing Hospital or from a Distinct Part Psych Hospital that uses an SUD diagnosis code as the primary diagnosis, or for inpatient services billed from a General Acute Care Hospital that uses an SUD diagnosis code as the primary diagnosis along with a visit from an LMHP during inpatient stay			

Demonstration Goal 2.2: Reduce readmission rates for OUD/SUD treatment. Evaluation Hypothesis: The demonstration will reduce hospital readmission rates for OUD/SUD.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Reduce readmission rates for OUD/SUD treatment)	Readmissions for OUD/SUD	2017-2023	Number of paid/accepted (ASAM 4-WM) claims in a reporting month (year) for inpatient withdrawal management services billed from a Mental Health Free-Standing Hospital or from a Distinct Part Psych Hospital that uses an SUD diagnosis code as the primary diagnosis, or for inpatient withdrawal management services billed from a General Acute Care Hospital that uses an SUD diagnosis code as the primary diagnosis along with a visit from an LMHP during inpatient stay, that follows within 30 days of a previous discharge from an ASAM 4-WM inpatient stay	N/A	Louisiana Medicaid Claims data	Analysis method changed from DD to ITS
Secondary Driver (Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT)						

Demonstration Goal 2.3: Increase use of evidence-based OUD/SUD patient placement criteria. Evaluation Hypothesis: The demonstration will increase the use of evidence-based OUD/SUD patient placement criteria.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Increase use of evidence-based OUD/SUD patient placement criteria)	Appropriate patient placement for OUD/SUD treatment	N/A	Number of unduplicated Medicaid beneficiaries in a reporting month (year) with a paid/accepted claim that uses an SUD diagnoses code as the primary diagnosis receiving medically appropriate placement	Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an SUD diagnosis code as the primary diagnosis	MCO Monitoring Reports	Outcome was excluded from Summative Evaluation Report. See <i>Limitation and Deviations from the Approved Evaluation Design</i> section for more detail.
Secondary Driver (Updates to the Behavioral Health Provider Manual to clarify that ASAM criteria should be used for each provider's assessment tool)						

Evaluation Question 3: Did care-coordination improve as a result of the demonstration?						
Demonstration Goal 3.1: Increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD.						
Evaluation Hypothesis: The demonstration will increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Increase initiation of follow-up after discharge from the emergency department or hospital for OUD/SUD)	Follow-up after discharge from the ED for OUD/SUD	2017-2022	Number of ED visits for OUD/SUD for which the beneficiary received follow-up within (a) 7 days of discharge or (b) 30 days of discharge	Total number of ED visits for OUD/SUD	Louisiana Medicaid Claims data	None
Secondary Driver (Continued monitoring of MCO compliance with existing contract requirements related to care transition activities)	Follow-up after discharge from the hospital for OUD/SUD		Number of hospital inpatient admissions for OUD/SUD for which the beneficiary received follow-up within (a) 7 days of discharge or (b) 30 days of discharge	Total number of hospital inpatient admissions for OUD/SUD		

Demonstration Goal 3.2: Increase adherence to and retention in treatment. Evaluation Hypothesis: The demonstration will increase adherence to and retention in treatment.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Increase adherence to and retention in treatment)	Share of those with an OUD/SUD diagnosis who receive follow-up treatment within 35-60 and 61-90 days after initial episode of care	2017-2022	Number of unduplicated Medicaid beneficiaries in a reporting month (year) with a paid/accepted claim that uses an SUD diagnoses code as the primary diagnosis who have no prior SUD service claim in the previous 90 days and who have at least one SUD service claim between days 35-60 and days 61-90 following initiation of treatment	Number of unduplicated Medicaid beneficiaries in a reporting month (year) with a paid/accepted claim that uses an SUD diagnoses code as the primary diagnosis who have no prior SUD service claim in the previous 90 days	Louisiana Medicaid claims data	Outcome adjusted to reflect Monitoring Metric #15:
Secondary Driver (Continued monitoring of MCO compliance with existing contract requirements related to care transition activities)						<i>Initiation-</i> Percentage of beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated OUD treatment within 14 days of the diagnosis. <i>Engagement-</i> Percentage of beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated treatment and who experienced at least 2 visits within 34 days of the initiation visit.

Evaluation Question 4: Did health outcomes for Medicaid beneficiaries with OUD/SUD improve as a result of the demonstration?						
Demonstration Goal 4.1: Reduce instances of drug overdose and overdose deaths.						
Evaluation Hypothesis: The demonstration will decrease the rate of drug overdose and the number of drug deaths.						
Driver	Measure Description	Timeline	Numerator	Denominator	Data Source	Deviation from Evaluation Design
Primary Driver (Reduce instances of drug overdose and overdose deaths)	Number of non-fatal drug overdoses	N/A	Number of unduplicated Medicaid beneficiaries enrolled in a reporting month (year) with a non-fatal occurrence of drug overdose. Non-fatal overdoses will be tracked using ICD-10 poisoning codes of all intents for medication/drugs/substances commonly abused and cross-referenced with death record data to exclude fatal overdoses.	N/A	Louisiana Medicaid Claims data and Louisiana Office of Public Health Vital Records	Outcome was excluded from Summative Evaluation Report. See <i>Limitation and Deviations from the Approved Evaluation Design</i> section for more detail.
	Share of those with an OUD/SUD diagnosis who experience a non-fatal overdose			Number of unduplicated Medicaid beneficiaries enrolled in reporting month (year) with a paid/accepted claim for date of service in reporting month (year) that uses an SUD diagnosis code as the primary diagnosis		
Secondary Driver (Increased availability of Naloxone)	Number of overdose deaths	2017-2023	Total number of deaths in Louisiana attributed to accidental poisoning by and exposure to drugs and other biological substances	N/A	National Vital Statistics System Mortality Multiple Cause-of-Death Restricted Use Files Louisiana Medicaid Claims data and data from the Advisory Council on Heroin and Opioid Prevention and Education (HOPE council)	Data source changed to Louisiana Medicaid Claims data Analysis method changed from DD to ITS

	Share of all deaths related to overdose			Total number of deaths in Louisiana	Key informant interviews with primary care/treatment providers and local health officials	Thematic analysis of qualitative data
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Limitations and Deviations from the Approved Evaluation Design

Outcome Measures

We omitted the analysis originally proposed for Demonstration Goal 2.3 due to a mismatch between the proposed data source (MCO monitoring reports) and the claims-based definitions outlined in our Evaluation Design. Additionally, Louisiana had already fully integrated ASAM criteria as part of its medical necessity determination process prior to the demonstration period. Given that these criteria were routinely enforced by MCOs, we determined that the inclusion of this measure would not generate meaningful new insight.

We also omitted non-fatal drug overdoses as an outcome from the Summative Evaluation Report because we encountered substantial data limitations that prevented us from implementing the measure as originally proposed. Specifically, while the Evaluation Design specified that non-fatal overdoses would be identified using ICD-10 poisoning codes and then cross-referenced with death records to exclude fatal cases, we were unable to reliably link Medicaid claims data to the Louisiana Vital Records death data at the individual level. As a result, we could not confidently distinguish between non-fatal and fatal overdose events using the intended method.

Second, the identification of drug overdose events in Medicaid claims data proved more challenging than anticipated. Many relevant diagnosis codes lack specificity regarding intent, substance type, or severity, and coding practices varied across providers and settings. These limitations raised concerns about the accuracy and consistency of the outcome definition.

Given these methodological and data-related challenges, we determined that the proposed measure would not produce valid or actionable results and made the decision to exclude it from the Summative Evaluation Report.

Evaluation Period

While the original Evaluation Design proposed using data from 2014 to 2017, we limited the pre-demonstration period to 2017 due to the Medicaid expansion implemented in July 2016. This expansion introduced substantial shifts in the Medicaid population, which would have confounded pre-demonstration trends. We determined that using only 2017 as the pre-period provided a more consistent baseline for trend estimation.

Although the demonstration formally began on February 1, 2018, we included January 2018 in the post-period to align with CMS guidance on the baseline period and to meet the 30-day retrospective data requirements built into several outcome metrics. This approach ensured accurate classification of service use in February 2018.

Data Sources

We deviated from the data sources listed in the approved Evaluation Design in several cases.

1. *SAMHSA Buprenorphine Treatment Practitioner Locator and Number of DATA-Certified Physicians:*

Initially, we planned to use these SAMHSA data sources to track the number of physicians who had completed the required training to prescribe buprenorphine for substance use disorders (commonly referred to as the "X-waiver"). However, two main issues arose:

- Historical Data Availability: We encountered difficulties obtaining historical data from the SAMHSA Buprenorphine Treatment Practitioner Locator, limiting our ability to examine trends in the number of certified providers over the demonstration period.
- Policy Change: The Consolidated Appropriations Act of 2023 eliminated the additional training requirement previously mandated for prescribers of buprenorphine for SUD treatment, effectively expanding the pool of eligible prescribers and rendering the original measure obsolete.

Given these issues, we determined that including these data sources would not yield meaningful or consistent trends over the evaluation period.

2. *Managed Care Organization (MCO) Monitoring Reports:*

Originally, we intended to utilize MCO monitoring reports to evaluate appropriate patient placement for OUD/SUD treatment (Demonstration Goal 2.3). However, as described in our earlier response to Comment 1, we encountered methodological concerns. Specifically, the definitions of numerator and denominator outlined in the approved evaluation plan were claims-based, while the monitoring reports relied on administrative audits, creating inconsistencies. Moreover, Louisiana's existing implementation of the ASAM criteria for medical necessity rendered this measure redundant. For these reasons, we excluded the MCO monitoring reports and associated measures from the report.

3. *National Vital Statistics System (NVSS) Mortality Multiple Cause-of-Death Files:*

We had originally proposed using the National Vital Statistic System Multiple Cause-of-Death files along with data from the Louisiana Office of Public Health Vital Records to track changes in drug overdose deaths. Instead, we elected to rely solely on the Vital Records data. This decision was driven by two main considerations.

- Timeliness: Louisiana Vital Records data were available to us with minimal lag, allowing for more up-to-date and relevant tracking of overdose mortality trends during the demonstration period. In contrast, the NVSS data involve longer processing and release timelines.
- Linkage to the Demonstration Population: Unlike the NVSS files, the Louisiana Vital Records data allowed us to measure drug overdose deaths for the

demonstration population in Louisiana. Because the NVSS files do not include information on insurance status, we were not able to distinguish overdose deaths among Medicaid enrollees in those data. We acknowledge that this change led to some sacrifice in methodological rigor (e.g., moving from DID to ITS), but we were better able to focus on the people who would be impacted by the demonstration waiver.

4. *Data from the Advisory Council on Heroin and Opioid Prevention and Education:* These data were initially included as a potential qualitative or contextual resource. However, our evaluation ultimately relied on Medicaid administrative data and overdose surveillance systems to assess demonstration outcomes. Key themes and implementation insights were instead gathered through structured stakeholder engagement and qualitative interviews, which we determined to be a more useful and feasible method for contextual evaluation.

Methods

The original evaluation design proposed a series of difference-in-differences (DD) and ITS analyses to track demonstration-related changes in outcomes, however during the course of our evaluation, we encountered significant data and methodological challenges that prevented us from effectively implementing these DID analyses as originally planned. We found substantial difficulties in constructing appropriate and comparable control groups within Louisiana, primarily due to the comprehensive, statewide implementation of the demonstration. Because the demonstration affected all Medicaid-enrolled individuals with OUD/SUD across Louisiana, identifying a comparable, untreated in-state population was not feasible.

Additionally, the onset of the COVID-19 pandemic significantly disrupted healthcare utilization patterns, beginning in early 2020 and continuing through subsequent years of the demonstration. These disruptions varied in timing, magnitude, and duration across the state and across populations, complicating efforts to construct reliable control groups as initially proposed.

Due to these methodological limitations, we opted for interrupted time series (ITS) analyses rather than DID designs, acknowledging the trade-off of relying solely on within-state, pre-post comparisons without external controls. The primary difference between the two approaches involves treatment effect identification. Identification in the DD method comes from a comparison between a group exposed to treatment (e.g., Louisiana Medicaid members with an SUD) and a counterfactual generated by an unexposed group, sometimes called a “control group”. Alternatively, identification in the ITS method comes from a comparison between a treated group and that group’s own baseline trend. DD is generally regarded as a more rigorous evaluation method because it can account for other changes happening concurrently with the intervention of interest that might affect outcomes (e.g., the COVID-19 pandemic). While estimates using the ITS method can provide a sense of changes over time associated with Louisiana’s SUD Demonstration, results should be interpreted in the context of a dynamic environment where multiple confounding factors are present.

For some metrics, we also deviated from the original ITS design in an attempt to account for the influence of the COVID-19 pandemic and related policy changes that affected Louisiana Medicaid SUD members. When it was apparent from the trend plot for a given monitoring metric that COVID-19 substantially altered the trend or level trajectory, we modified our ITS model by adding an indicator for April 2020 (the first full month of the COVID-19 pandemic in Louisiana) and an interaction between this indicator and the time trend. The alternative ITS model took the following form:

$$Outcome_t = \beta_0 + \beta_1 Time_t + \beta_2 Implement_t + \beta_3 COVID_t + \beta_4 Time_t \times Implement_t + \beta_5 Time_t \times COVID_t + \varepsilon_t$$

Changes from our primary specification include the addition of an indicator for April 2020, *COVID*, and an interaction between this indicator and the time trend, *Time* × *COVID*. This modification allowed us to estimate post-demonstration level and slope changes *and* post-COVID level and slope changes for selected outcomes. Our goal with this approach was to separate potential demonstration-related changes from COVID-related changes.

On the qualitative side, the original design included interviews with providers who chose not to prescribe MAT, and emergency department managers. However, we were unable to recruit these types of informants. To compensate for their absence, we asked informants who do prescribe MAT about the pros and cons of doing so, and asked parish health officials to talk about emergency department overuse in their service areas. In general, recruitment for interviews posed a significant challenge.

Results

The number of Louisiana Medicaid beneficiaries with an SUD increased from 64,260 at the beginning of the demonstration period to more than 86,000 by the end of 2022 (Appendix Figure 1). Notably, despite the overall increase in the count of beneficiaries with an SUD, the percent of beneficiaries with an SUD remained largely stable over the demonstration period (Appendix Figure 2). In other words, growth in the count of beneficiaries diagnosed with an SUD was driven primarily by growth in Medicaid enrollment. Largely due to the COVID-19 Continuous Coverage Requirement, Louisiana Medicaid enrollment increased from 1,459,238 in January 2018 to 1,896,206 by December 2022 (KFF, 2024). Estimates in Appendix Table 2 indicate that the share of Louisiana Medicaid beneficiaries with SUD was growing at a rate of 0.067 percentage points (95% CI, 0.057 to 0.078) per month in the pre-demonstration period, but that growth levelled off beginning in mid-to-late 2018 and remained near zero throughout the demonstration period (estimate = 0.002; 95% CI, -0.004 to 0.007).

While not tied to a specific demonstration goal, tracking the number and share of Louisiana Medicaid beneficiaries with an SUD was an important consideration for the evaluation team. Evidence of moderation in the growth rate of Medicaid beneficiaries with an SUD diagnosis is consistent with the demonstration waiver achieving its stated aims. Further, this initial analysis highlights the importance of adjusting for Medicaid enrollment growth when evaluating demonstration effects. As such, for nearly all metrics discussed below, we track both counts and rates over the demonstration period.

Demonstration Goal 1.1

The primary driver of Demonstration Goal 1.1 is to increase access to evidence-based OUD/SUD care. We used two measures to evaluate this driver:

- Medicaid Beneficiaries Treated in an IMD for SUD (Monitoring metric #5) – the number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider.
- Average Length of Stay in IMDs (Monitoring metric #36) – the average length of stay for beneficiaries discharged from IMD inpatient/residential treatment for SUD.

Appendix Figures 3 and 4 plot the number and percent of Medicaid beneficiaries treated in an IMD for SUD between January 2017 (a year before the demonstration waiver took effect) through December 2022. In both cases, post-demonstration trends appear to be impacted by the COVID-19 pandemic and, as a result, we estimated models that allowed for a trend break coinciding with the first peak wave of COVID-19 infections in Louisiana in April 2020. These COVID-adjusted figures are presented in Appendix Figures 3a and 4a and ITS estimates are reported in Appendix Tables 3a and 4a. Figure 4a indicates that the share of Medicaid beneficiaries treated in an IMD for SUD was decreasing at a rate of 0.029 beneficiaries per month (95% CI, -0.042 to -0.015), on average, in the pre-demonstration period. Coinciding with the implementation of the demonstration waiver, the percent of beneficiaries treated in an IMD for SUD increased substantially (estimate = 0.913 percentage points; 95% CI, 0.777 to 1.049) and then maintained an average growth rate similar to that observed in the pre-period through the

end of 2020. Following the onset of the COVID-19 pandemic, the percent of beneficiaries with an SUD treated in an IMD began to grow at a rate of 0.016 percentage points per month (95% CI, 0.008 to 0.023), on average, through December 2022.

Coinciding with the increase in members with an SUD treated in an IMD, we document an overall increase in the average length of an IMD stay over the demonstration period. Prior to January 18 2018, the average IMD stay for an SUD member lasted approximately 10 days, but by the end of 2022, the average stay had increased to 15.25 days.

The secondary drivers for Demonstration Goal 1.1 are:

- Maintaining the status quo for OUD/SUD treatment in IMDs
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring

We used these measures to evaluate the secondary drivers:

- Early intervention (ASAM 0.5; Monitoring metric #7) – the number of beneficiaries who used early intervention services (such as procedure codes associated with SBIRT) during the measurement period.
- Outpatient Services (ASAM 1; Monitoring metric #8) – the number of beneficiaries who used outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period.
- Intensive Outpatient and Partial Hospitalization (ASAM 2; Monitoring metric #9) – the number of beneficiaries who used intensive outpatient and/or partial hospitalization services for SUD (such as specialized outpatient SUD therapy or other clinical services) during the measurement period.
- Residential and Inpatient Services (ASAM 3 and 4; Monitoring metric #10) – the number of beneficiaries who used residential and/or inpatient services for SUD during the measurement period.
- Withdrawal Management (Monitoring metric #11) – the number of beneficiaries who use withdrawal management services (such as outpatient, inpatient, or residential) during the measurement period.

The early intervention measure (ASAM 0.5) is not interpretable because of small numbers (there are between 0 and 8 beneficiaries using early services for most of the demonstration period) (Appendix Figure 6 and Appendix Figure 7). Low use rates of early intervention services can be explained by the fact that Louisiana Medicaid coverage for ASAM 0.5 services currently only extends to beneficiaries who are pregnant.

The percent of beneficiaries using outpatient services for SUD (ASAM Level 1), including outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients was falling slightly in the pre-demonstration period (Appendix Figures 9 and 9a). This decline moderated slightly from January 2018 through March 2020 before increasing steadily in the post-COVID period. By late 2022, approximately 15% of Medicaid members with an SUD diagnosis were receiving outpatient services for SUD each month compared to approximately 10% prior to the demonstration period. ITS estimates indicate that the trend in

outpatient service use for SUD was declining in the pre-demonstration period (estimate = -0.232 percentage points; 95% CI, -0.305 to 0.158) (Appendix Table 9a). However, during the post-COVID period, the percent of beneficiaries with an SUD diagnosis using outpatient services for SUD increased by an average of 0.100 percentage points (95% CI, 0.055 to 0.146) per month.

Though the number of Medicaid members with an SUD diagnosis using intensive outpatient and partial hospitalization SUD services (ASAM Level 2) increased over the waiver period (Appendix Figure 10), this increase was largely driven by enrollment gains. Appendix Figure 11 indicates that the percent of beneficiaries with an SUD diagnosis using intensive outpatient and partial hospitalization SUD services remained relatively flat over the demonstration period. ITS estimates indicate that the slope change from the pre- to post-waiver period was statistically insignificant (estimate = 0.006 percentage points; 95% CI, -0.003 to 0.014). This pattern leads us to conclude that the demonstration had no meaningful impact on the rate of increase for intensive outpatient (ASAM 2.1) SUD service use. Partial hospitalization (ASAM 2.5) is not a Louisiana Medicaid covered service.

The number and share of Medicaid members using residential or inpatient SUD services (ASAM Level 3 and 4) increased over the demonstration period (Appendix Figure 12 and Appendix Figure 13). Slightly more than 2% of members with an SUD diagnosis used residential or inpatient SUD services in December 2017 and that share had increased to more than 3% by the end of 2022.

Finally, the percent of Medicaid members engaging in withdrawal management services, including outpatient, inpatient, or residential services, was largely stable over the demonstration period (Figures 15 and 15a). ITS estimates indicate that the share of SUD members using withdrawal management services was declining in the pre-demonstration period (estimate = -0.025; 95% CI, -0.032 to -0.018). This rate increased in early 2018 and remained flat through the onset of the COVID-19 pandemic, where it experienced another level increase (estimate = 0.237, 95% CI, 0.113 to 0.362). Following this level increase, the trend again began to decline such that withdrawal management use in December 2022 was similar to use rates in the pre-demonstration period. We conclude that the demonstration did not meaningfully alter the pattern of withdrawal management service use in Louisiana Medicaid.

Overall, we conclude that the demonstration is having a positive impact on the treatment of beneficiaries in ways consistent with evidence-based care. This claim is supported by growth in the share of Medicaid beneficiaries with an SUD diagnosis who are being treated in an IMD and an increase in the average length of stay for SUD treatment in IMDs. We have also documented increased ASAM Level 1 and withdrawal management service use among beneficiaries with an SUD diagnosis.

Demonstration Goal 1.2

The primary driver of Demonstration Goal 1.2 is to increase access to and utilization of medication-assisted treatment (MAT) for OUD/Alcohol Use Disorder (AUD). We evaluated this driver using the following measure:

- Medication-Assisted Treatment (Monitoring metric #12) – the number of beneficiaries who have a claim for MAT for SUD during the measurement period.

The number and percent of beneficiaries with a claim for MAT had been increasing steadily both before and during the early waiver period, but increased dramatically beginning in 2020 and has remained at elevated levels through 2022 (Appendix Figures 16 through 17a). On average, 5,200 unique Medicaid members per month had an MAT claim in the pre-waiver period and that number was increasing by approximately 130 members per month (estimate = 131.39; 95% CI, 123.74 to 139.04). In the post-waiver period, more than 11,000 members per month had an MAT claim, on average, and the increase was largely driven by the jump in MAT use in early 2020 (estimate = 3.648; 95% CI, 2.581 to 4.714) rather than a change in the trend of MAT use. Despite the large growth in Medicaid members from 2020 through 2022 resulting from the CEP, the share of members with an SUD diagnosis using MAT also increased over the waiver period (Appendix Figure 17 and Figure 17a) indicating that the increased MAT use in the post-demonstration period was not purely a function of increased Medicaid enrollment.

The secondary drivers for Demonstration Goal 1.2 are:

- To educate abstinence-based residential providers on benefits of MAT
- To encourage physicians to become certified dispensers.

We used the following measure to evaluate the secondary drivers:

- SUD Provider Availability, Medication-Assisted Treatment (Monitoring Metric #14) - the number of Medicaid providers who were qualified to deliver SUD services during the measurement period and who meet the standards to provide buprenorphine or methadone as part of MAT.

The number of providers who were enrolled in Medicaid, were qualified to deliver SUD services, and who met the standards to provide buprenorphine or methadone as part of MAT increased steadily over the demonstration period. Appendix Table 19 indicates that the number of MAT providers per 1,000 Medicaid SUD members averaged 6.94 in the pre-demonstration period and 8.55 in the post-demonstration period. There was no clear trend break associated with the implementation of the secondary drivers beginning in October 2018 (slope change estimate = -0.004; 95% CI, -0.028 to 0.020). Therefore, we conclude that the demonstration did not substantially alter the growth rate in MAT providers per member with an SUD diagnosis.

We also collected qualitative data related to MAT access and use in Louisiana. Staff from all parish health departments in the State were invited to participate in an interview, and four agreed. We also interviewed three physicians who prescribe MAT and one outreach worker. In general, informants believed that access to MAT had improved in Louisiana since the start of the SUD 1115 Waiver, which is consistent with the trend presented in Appendix Figure 19. However, as the Medicaid claims data shows, use of MAT among beneficiaries who have an SUD diagnosis was less than 20 percent in late 2022, and informants described a range of barriers to the more widespread use of MAT.

Barriers to use of MAT

Referrals

Practitioners explained that the majority of their MAT patients are self-referred, and that many of them learn about MAT through word-of-mouth. In some places, outreach workers visit locations where substance use is common, such as homeless encampments, to try and get people into care. MAT is not well understood by the public, and potential MAT patients are often unaware of the existence of services and what services their insurance will cover. MAT tends not to be openly advertised.

The outreach worker explained that there are few referrals from health service providers to MAT, and that the referrals that do occur are typically passive. Patients are given information on where to go for MAT, but there is no “warm hand-off,” which the informant felt would result in more successful referrals.

It's no longer, I'm not sure if you're familiar with this verbiage, a warm handoff to people. So, people are not meeting and saying, 'hey, Ms. X gave me the telephone number. She called Ms. Y; Ms. Y knows that I'm coming over. When the services were referred or brought up, Ms. X reached out while we were sitting there and we got an appointment with Ms. Y, and I know what I'm doing when I leave here.'

Most of the information now is, 'here's the telephone number. Here's the person in charge, call them, you know, and try to set up an appointment.' And if a person calls once or twice, and they can't get in contact with the person who they're supposed to get in contact with, they're not going to call anymore. So, then they're not going to seek those services.

Stigma

Another barrier that informants identified was stigma against MAT. Patients and their families sometimes believe that people who receive MAT are “still using,” which may dissuade those struggling with addiction from seeing it as a viable pathway to recovery. One provider expressed that stigma at this level can be overcome with education. Another mechanism by which stigma can be a barrier to MAT is through the justice system. Informants stated that law enforcement and the court system may also not view MAT as a medical intervention. One mentioned that in the past, patients had been denied custody of their children because they were receiving MAT.

Several years ago, there was a big Parish-wide thing that was primarily law enforcement and the Sheriff's office, city police, they were there. And they asked me to give a presentation about MAT and, you know, afterwards the response was remarkable. You know, I had one of the guys from drug court was there. Um, several...in the Sheriff's department were like, 'man, before I saw this, I was totally against methadone. I thought was terrible,' he said, 'but I think this is, this is really a viable option for opiate addiction.'

And, you know, it made a difference in their thinking. Now that did not translate into the difference in referrals to us from any law enforcement agency or system, but with proper education, I think some of those barriers can be broken. I mean, I don't know, I have not met with any judges around here, but it hadn't been that long ago when judges were like 'no, you can't, you don't have custody of your kids if you're on methadone.'

Lastly, stigma among physicians was viewed as an impediment to MAT use. One physician explained that older physicians had typically not been trained in MAT and may not view addiction as a disease that can be treated medically, and that in their view, this results in fewer patients being referred from primary care for MAT services.

Socioeconomic factors

When methadone is initiated through an OTP, patients typically have to visit the clinic daily for between thirty and ninety days. This constitutes a significant barrier when patients do not live close to the facility or do not have reliable transportation. Further, patients experiencing homelessness may not have the documents needed to initiate care or apply for Medicaid.

Some of them, our homeless population, doesn't have things like a driver's license or an ID or their Medicaid card, or just certain basic things that anytime any of us go to a doctor, we present all of these things, right. We present our, our, you know, a medical history or ID, or just basic things to get engaged in treatment. So, one of the biggest barriers we've seen is for us and for the indigent and the Medicaid folks are those that are Medicaid yet just apply for Medicaid, you have to have certain documents, you have to have a driver's license. You have to have proof of identity. You have to have proof of income. You have to have, I don't even know, it might be a secure social security card. And a lot of the folks that we're dealing with in the homeless population don't have these things and so barrier for them getting services. Cause I can't bill the state general fund or the indigent dollar without first attempting to get that person Medicaid, but I can't get the Medicaid until they've got all of their other stuff together.

Informants also identified migrant construction workers who came to West Louisiana from Texas after the hurricanes, and their families, as being a group that could be difficult to reach with addiction services due a lack of health insurance coverage in Louisiana. While this group was not directly targeted by the demonstration waiver, they represent a critical population that might benefit from expanded outreach and support services.

In Southwest Louisiana, because of the hurricanes, we have a lot of...workers have come in from Texas and they're bringing their families. And if there is an overdose situation, if they're non-documented and in the state of Louisiana and they don't have insurance that I can't, we can't treat them. At least that's what my contract with the department of health emergency department can cause they're mandated to, as an outpatient provider, if you don't have proof of income or proof of residency, I can't use the Louisiana state general funds to fund your treatment. So that barrier that we've seen.

Inadequate numbers of providers

Informants emphasized the need for more providers who are able and willing to prescribe medications to treat SUD, particularly in rural areas. One health official stressed that once a patient decides to start MAT, there may be a short window to initiate treatment. If wait times are too long, the patient will likely resume their substance use.

I know that sometimes it's difficult to access in terms of getting in immediately. There's often, in terms of getting into the providers that do accept Medicaid, there's often wait times. And you

know, one of the biggest issues with substance use disorders when somebody is ready for treatment, if you have really small window...when somebody goes into the hospital because they've overdosed and if you can't link to care really within 24 hours, you probably got somebody who's going to start using again. So that's a huge, a huge hurdle that we're trying to really bring our providers to the table and talk about, you know, quick access to care. And we have examples of people who went into the ER with an overdose and basically left the hospital and major withdrawals, so nothing to treat the withdrawal symptoms and then couldn't get into care or linked to a provider for several days. And this is what our team is trying to help them [with]. And so, they're in such severe withdrawal. They can't wait to get Suboxone they're going and using again because it's so unbearable. So, it's that wait time is a big, big issue.

When asked why more providers do not prescribe MAT, one physician explained that in their practice, they lose money on MAT patients who have Medicaid. Another explained that the number of visits that Medicaid would reimburse for an MAT patient was inadequate. This serves as a disincentive for other physicians to offer these services, particularly on a large scale. Another informant explained that general practitioners are typically not used to handling the complex medical and social needs of a patient with an SUD, and that it was necessary to have providers who were solely dedicated to SUD treatment. However, the financial constraints of doing so meant that MAT providers were scarce in many regions of the state with lower density populations.

Stock issues

One physician considered pharmacies to be a barrier to patients' receiving MAT. They explained that pharmacies were wary of being cited by the Drug Enforcement Agency and would limit the amount of MAT that they would dispense. This caused patients to have difficulty filling their prescriptions for MAT.

Impact of disasters on MAT services in Louisiana

Louisiana experienced multiple disasters over the course of the five-year SUD 1115 waiver period. In 2020, Category 4 Hurricane Laura, followed six weeks later by Category 2 Hurricane Delta, devastated much of the state, particularly Lake Charles and the surrounding areas in southwestern Louisiana. Hurricane Ida, another Category 4 hurricane, caused widespread damage across southeastern Louisiana in 2021. Louisiana was also hit early and hard by COVID-19, with the first case reported on March 9, 2020. Informants detailed how these disasters impacted MAT services.

Hurricanes

For Hurricane Ida, informants from the harder hit parishes were not available for interviews, and informants in the New Orleans metropolitan area felt that Hurricane Ida did not substantially interrupt MAT services, as most patients were able to be referred to other providers.

Hurricane Laura caused significant and long-term disruptions. Many health centers, pharmacies, and halfway houses were destroyed. In some cases, providers were able to use telemedicine to continue treating patients. When possible, displaced patients were referred to other providers. However, some were lost to follow-up, with one health official in southwest Louisiana estimating that they had lost contact with 200 patients after Hurricane Laura.

COVID-19 pandemic

In reaction to restrictions on gathering during the COVID-19 pandemic, providers ramped up the use of telemedicine; this later proved to be an asset during hurricanes as well. In accordance with guidance from the Substance Abuse and Mental Health Services Administration (SAMHSA), OTPs increased the number of take-home doses that they prescribed so that patients would have to make less visits to clinics or pharmacies. Informants reported that this practice went well and that patients were largely compliant with treatment.

MAT use for Medicaid beneficiaries with a qualifying SUD diagnosis has increased dramatically over the demonstration period, though the qualitative evaluation analysis suggests further room for improvement. Additionally, the number of MAT prescribing providers per 1,000 Medicaid beneficiaries with an SUD increased over the demonstration, while the number of providers per beneficiary qualified to deliver SUD services has been steadily declining from the pre- to the post-demonstration period (see Demonstration Goal 1.3). Therefore, we conclude that the demonstration has improved access to MAT and to MAT prescribing providers for Medicaid beneficiaries with an SUD diagnosis, but that SUD provider availability should remain an area of focus for potential improvements.

Demonstration Goal 1.3

The primary driver of Demonstration Goal 1.3 is to ensure sufficient provider capacity at each level of care for OUD/SUD. We evaluated this driver using the following measure:

- SUD Provider Availability (Monitoring metric #13) – the number of providers who were enrolled in Medicaid and qualified to deliver SUD services during the measurement period.

There was a large increase in the number of providers who were enrolled in Medicaid and were qualified to deliver SUD services that coincided with the implementation of the waiver in early 2018 (Figure 20). Since that time, provider capacity has continued to slowly increase (post-period slope estimate = 9.09; 95% CI, 5.81 to 12.38). There were approximately twice as many providers of SUD services in 2022 compared to 2017.

The secondary driver for Demonstration Goal 1.3 is:

- Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT.

For Demonstration Goal 1.3, we used the following measure to evaluate the secondary driver:

- SUD Provider Availability per Medicaid member with an SUD diagnosis (Monitoring metric N/A) – the number of providers who were enrolled in Medicaid and qualified to deliver SUD services during the measurement period per 1,000 Medicaid beneficiaries with a paid/accepted claim that uses an SUD diagnosis as the primary diagnosis code.

Appendix Figure 21 indicates that the number of Medicaid providers qualified to deliver SUD services per 1,000 Medicaid beneficiaries was increasing prior to the implementation of the secondary driver (estimate = 0.577; 95% CI, 0.271 to 0.882). However, by mid-2018, this growth

rate had stalled and SUD provider availability began to decline following the onset of the COVID-19 pandemic. ITS estimates indicate that the number of SUD providers per 1,000 beneficiaries with an SUD fell by an average of 0.157 providers per month in the post-period (95% CI, -0.216 to -0.098). We conclude that the requirement for MCOs to update their Specialized Behavioral Health network development and management plan, which took effect on January 1, 2019, had little impact on SUD provider availability per Medicaid member and that SUD provider availability should remain an area of focus for potential improvements.

Demonstration Goal 2.1

The primary driver of Demonstration goal 2.1 is to decrease the use of medically inappropriate care and reduce reliance on emergency department and hospital services for OUD/SUD treatment. The secondary driver is to require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT. We evaluated these drivers using the following measures:

- Emergency Department Visits for SUD (Monitoring metric #23) – the number of ED visits for SUD per 1,000 beneficiaries in the measurement period.
- Inpatient Stays for SUD (Monitoring metric #24) – the number of inpatient stays for SUD per 1,000 beneficiaries in the measurement period.

Appendix Figure 22 indicates that the number of emergency department visits for SUD per 1,000 Medicaid members was increasing slightly prior to the implementation of the secondary driver in February 2019 (estimate = 0.014; 95% CI, -0.002 to 0.030). Following the implementation of the secondary driver, rates of emergency department use for SUD members began to trend downwards (estimate = -0.018; 95% CI, -0.025 to -0.012). Medicaid members averaged approximately 2.5 visits per 1,000 each month from 2017 through early 2019 (Appendix Table 22). By late 2022, that number had fallen to 2 visits per 1,000 members each month.

Inpatient stays for SUD per 1,000 Medicaid members followed a similar pattern to emergency department use. Prior to the implementation of the secondary driver, inpatient stays for SUD increased at a rate of 0.025 stays per month on average (95% CI, 0.016 to 0.035) (Appendix Figure 23 and Appendix Table 23). Following the implementation of the secondary driver, inpatient stays for SUD declined by 0.007 stays per month on average (95% CI, -0.014 to -0.001).

The fact that both of the Demonstration Goal 2.1 outcomes declined (improved) with the implementation of the secondary driver is consistent with a scenario in which updating MCO Specialized Behavioral Health network management plans improved care outcomes for Medicaid members with an SUD diagnosis. However, it is worth noting that the Demonstration Goal 2.1 measures include emergency department visits and inpatient stays when there is an SUD diagnosis in any position in the data (i.e., it could be the primary diagnosis, or it could be a secondary or later diagnosis that was not the cause of the specific admission). Therefore, it is not clear whether emergency department visits or inpatient stays where an SUD diagnosis is primary on the claim are changing in similar ways. We elaborate on this limitation below.

Demonstration Goal 2.2

The primary driver of Demonstration goal 2.2 is to reduce readmission rates for OUD/SUD treatment. The secondary driver is to require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT. We evaluated these drivers using the following measures:

- Readmissions among Beneficiaries with SUD (Monitoring metric #25)

Appendix Figure 24 and Table 24 indicate that rates of all-cause hospital readmissions among Medicaid members with an SUD diagnosis were rising in the pre-period (estimate = 0.0016, 95% CI, 0.0013 to 0.0019) before leveling off with the implementation of the secondary driver. So, while it does not appear to be the case that the demonstration was associated with reduced readmission rates compared to the pre-demonstration period, the demonstration was associated with a reduction in the growth rate of readmissions for Medicaid members with an SUD diagnosis.

Demonstration Goal 3.1

Demonstration goal 3.1 is to increase initiation of follow-up after discharge from the emergency department for Alcohol and Other Drug Abuse or Dependence (AOD). We measured this by the percentage of ED visits for beneficiaries age 18 and older with a principal diagnosis of AOD abuse or dependence who had a follow-up visit for AOD abuse or dependence within 7 and within 30 days of the ED visit (Monitoring metric #17) and through a care coordination survey. We describe the results of both the quantitative and qualitative analyses in this section, but caution that sample sizes for the qualitative analysis are small and so our interpretation of the findings is not generalized to the entire state. For ease of interpretation, we have presented the qualitative results in separate tables so that sample sizes at each threshold are clearly displayed.

The share of Medicaid members with an ED visit for AOD who had a follow-up visit for AOD abuse or dependence within 7 and within 30 days of the ED visit increased following the implementation of the secondary drivers in mid-2019. Appendix Figure 25 tracks 7-day follow-up and Appendix Figure 26 tracks 30-day follow-up. In both cases, we observed a statistically significant increase in follow-up associated with the implementation of the secondary driver.

Results of the care coordination survey showed that, in 2019, nearly 13 percent of surveyed facilities did not obtain prior authorization for medications requiring it, for any patients prior to discharge (Table 3). In 2020, the percentage had increased to 20.0, but dropped to zero in 2021. The percentage of facilities that obtained prior authorization for at least 75 percent patients increased from 37.5 percent in 2019 to 75.0.0 percent in 2021 but dropped to zero in 2021.

Table 4. Percentage of your inpatients needing prior authorization for medications who have it at the time of discharge

	2019		2020		2021	
	n	%	n	%	n	%
None	1	12.5	2	20.0	0	0.0
1-24%	0	0.0	0	0.0	1	12.5

25-49%	1	12.5	1	10.0	0	0.0
50-74%	0	0.0	0	0.0	1	12.5
75-100%	3	37.5	4	40.0	6	75.0
Don't know	3	37.5	3	30.0	0	0.0
Total	8	100.0	10	100.0	8	100.0

Notes: n=inpatient and residential facilities.

All facilities surveyed indicated that at least some of their patients receive a referral or information about outpatient behavioral health services prior to discharge (Table 4). The percentage who did so with all patients was relatively unchanged from 2019 to 2020. In 2021, all facilities that responded to the question reported that at least 50 percent of patients had such a referral.

Table 5. Percentage of inpatients who have information about or a referral to outpatient behavioral health services prior to discharge

	2019		2020		2021	
	n	%	n	%	n	%
None	0	0.0	0	0.0	0	0.0
1-24%	1	12.5	1	10.0	0	0.0
25-49%	1	12.5	1	10.0	0	0.0
50-74%	0	0.0	1	10.0	2	22.5
75-100%	6	75.0	7	70.0	5	62.5
Don't know	0	0.0	0	0.0	1	12.5
Total	8	100.0	10	100.0	8	100.0

Notes: n=inpatient and residential facilities.

In some cases, patients cannot go home or do not have housing after being discharged from an inpatient or residential facility (Table 5). In 2019, 62.5 percent of surveyed facilities indicated that they coordinate with other organizations to secure housing prior to discharge for these individuals. In 2020, that percentage had risen slightly to 70.0 percent; it rose again to 75.0 percent in 2021.

Table 6. Percentage of facilities that coordinate with other organizations when a patient cannot go home or has no housing after discharge

	2019		2020		2021	
	n	%	n	%	n	%
Yes	5	62.5	7	70.0	6	75.0
No	3	37.5	3	30.0	2	25.0
Total	8	100.0	10	100.0	8	100.0

Notes: n=inpatient and residential facilities.

In both 2019 and 2020, the majority of inpatient facilities referred or provided information to patients about other services at discharge, most frequently, medical and housing services (Table 6). Information about social work and employment services were less frequently provided. In

2021, facilities reported making referrals related to medical services, legal services, and education.

Table 7. Other types of health or social services to which facilities refer or provide information to patients

Services	2019		2020		2021	
	n	%	n	%	n	%
Medical	7	87.5	9	90.0	2	25.0
Housing	7	87.5	9	90.0	0	0.0
Dental	6	75.0	8	80.0	0	0.0
Social work/Case management	6	75.0	7	70.0	0	0.0
Employment	5	62.5	6	60.0	0	0.0
Legal	0	0.0	0	0.0	2	25.0
Education	0	0.0	0	0.0	1	12.5
Total	8	100.0	10	100.0	8	100.0

Notes: n=inpatient and residential facilities.

Facilities were asked to list the organizations to which they refer patients after discharge (Table 7). In 2019, half of facilities referred to only one organization. This decreased to 40 percent in 2020. By 2021, half of facilities referred discharged patients to five organizations.

Table 8. Number of organizations to which inpatient facilities refer patients after discharge.

Organizations	2019		2020		2021	
	n	%	n	%	n	%
None/Don't know	1	12.5	1	10.0	2	25.0
1	4	50.0	4	40.0	2	25.0
2	1	12.5	2	20.0	0	0.0
3	0	0.0	1	10.0	0	0.0
4	0	0.0	0	0.0	0	0.0
5	2	25.0	2	20.0	4	50.0
Total	8	100.0	10	100.0	8	100.0

Notes: n=inpatient and residential facilities.

Facilities were also asked to characterize the types of relationships they have with referral organizations (Table 8). The share of facilities with informal relationships increased from 43.8 percent in 2019 to 50 percent in 2021. The share of facilities with a formal relationship rose annually between 2019 and 2021. These increases were at the expense of facilities with the same parent organization, which decreased from 43.8 percent in 2019 to 18.2 percent in 2021. These limited results should be interpreted with caution as they are likely influenced by the specific facilities that responded in each round.

Table 9. Type of relationship with referral organizations

Relationship	2019		2020		2021	
	n	%	n	%	n	%
Informal	7	43.8	8	38.1	11	50.0

Formal	2	12.5	5	23.8	7	31.8
Same parent	7	43.8	8	38.1	4	18.2
Total	16	100.0	21	100.0	22	100.0

Notes: n=organizations to which discharged patients are referred.

The degree to which inpatient facilities facilitate referrals varies (Table 9). In 2019, half of the facilities simply gave verbal instructions to patients, and half scheduled the appointment for the patient. In 2020, nearly 62 percent of facilities reported scheduling appointments for patients. In 2021, no facilities reported giving verbal instructions to patients, while 72.7 percent of facilities scheduled appointments for patients. Other methods, employed by less than 10 percent of facilities, were giving a written referral to the patient and faxing a referral to the provided.

Table 10. Methods which patients are referred

Referral method	2019		2020		2021	
	n	%	n	%	n	%
Verbal instruction to patient	8	50.0	8	38.1	0	0.0
Schedule appointment for patient	8	50.0	13	61.9	16	72.7
Written referral given to patient	1	6.3	1	4.8	2	9.1
Referral faxed to provider	1	6.3	1	4.8	0	0.0
Total	16	100.0	21	100.0	22	100.0

Notes: Respondents could indicate multiple methods. n=organizations to which discharged patients are referred.

In 2019, 37.5 percent of facilities reported that they did not proactively send patient information with referrals (Table 10). This percentage decreased to 28.6 percent in 2020 and 9.1 in 2021. Transmission methods varied considerably between years. In 2019, the most frequently used method was transfer through the same system. In 2020, using the same system and telephone were most frequently mentioned. In 2021, the most common transmission method was fax.

Table 11. Methods by which patient information is transmitted to the provider with the referral

Transmission method	2019		2020		2021	
	n	%	n	%	n	%
No information proactively sent	6	37.5	6	28.6	2	9.1
Same system	6	37.5	7	33.3	1	4.5
Sent with patient	3	18.8	3	14.3	6	27.3
Telephone	3	18.8	7	33.3	6	27.3
EMR/EHR	3	18.8	4	19.0	0	0.0
Fax	2	12.5	0	0.0	8	36.4
In person	0	0.0	1	4.8	0	0.0
Total	16	100.0	21	100.0	22	100.0

Notes: n=organizations to which discharged patients are referred.

Demonstration Goal 3.2

Demonstration goal 3.2 is to increase adherence to and retention in treatment. The measure used to evaluate this goal is the initiation and engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD). This is a complicated measure with numerous breakdowns.

The measure includes the percentage of beneficiaries aged 18 and older with a new episode of alcohol or other drug (AOD) abuse or dependence who received the following:

- Initiation of AOD Treatment - percentage of beneficiaries who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth, or medication treatment within 14 days of the diagnosis.
- Engagement of AOD Treatment - percentage of beneficiaries who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.

The following diagnosis cohorts are reported for each rate:

1. Alcohol abuse or dependence
2. Opioid abuse or dependence
3. Other drug abuse or dependence
4. Total AOD abuse or dependence

ITS analyses indicate that both 14-day initiation (Appendix Figure 27 and Table 27) and engagement within 34 days of treatment (Appendix Figure 28 and Table 28) for alcohol abuse or dependence had been increasing before and after the intervention, but the rate of increase slowed slightly after the intervention (initiation slope change estimate = -0.246; 95% CI, -0.317 to -0.176; engagement slope change estimate = -0.058, 95% CI, -0.099 to -0.016).

ITS analyses indicate that both initiation and engagement for opioid abuse or dependence (Appendix Figure 29 and Appendix Figure 30) had been increasing steadily before and after the intervention with no post-intervention trend change (initiation slope change estimate = -0.016; 95% CI, -0.111 to 0.078; engagement slope change estimate = -0.057, 95% CI, -0.169 to 0.055).

ITS analyses of initiation and engagement for other drug abuse or dependence (Appendix Figure 31 and Appendix Figure 32) indicate that both measures had been increasing before and after the intervention, but the rate of increase slowed slightly after the intervention (initiation slope change estimate = -0.208; 95% CI, -0.268 to -0.147; engagement slope change estimate = -0.060, 95% CI, -0.122 to 0.002).

Finally, ITS analyses of initiation and engagement for alcohol and other drug abuse or dependence treatment followed a similar pattern of increasing use in the pre-intervention period that continued to increase at a slower rate in the post-period (initiation slope change estimate = -0.188; 95% CI, -0.243 to -0.133; engagement slope change estimate = -0.068, 95% CI, -0.125 to -0.011). (Appendix Figure 33 and Appendix Figure 34).

Demonstration Goal 4.1

The primary driver of Demonstration goal 4.1 is to reduce instances of drug overdose and overdose deaths. The secondary driver is increased availability of Naloxone. We used two measures to evaluate the primary driver:

- Drug Overdose Deaths (count) (Monitoring metric #26) – the number of overdose deaths during the measurement period among adult Medicaid beneficiaries living in a geographic area covered by the demonstration.
- Drug Overdose Deaths (rate) (Monitoring metric #27) – the rate of overdose deaths during the measurement period among adult Medicaid beneficiaries living in a geographic area covered by the demonstration. Rate is per 1,000 beneficiaries.

Drug overdose deaths per 1,000 adult Medicaid members in Louisiana was increasing at a rate of 0.0009 deaths per month (95% CI, 0.0000 to 0.0019), on average, in the pre-intervention period (Figure 36a and Table 36a). From January 2018 through March 2020, this growth rate had fallen by 0.0006 deaths per month (95% CI, -0.0017 to 0.0006). However, concurrent with the onset of the COVID-19 pandemic, drug overdose death rates spiked and remained at elevated levels through 2022. There were an average of 0.030 drug overdose deaths per month among Louisiana Medicaid members in 2017, the year prior to the implementation of the demonstration. By 2022, that number had more than doubled. Unfortunately, effects of the demonstration waiver on drug overdose deaths are confounded by the sharp increase in overdose deaths associated with the COVID-19 pandemic and the proliferation of fentanyl, which has contributed to a growing number of opioid-related overdose deaths (CDC, 2024).

Required Evaluation Topic: Demonstrate patterns and trends in Medicaid costs associated with SUD 1115 demonstration

The evaluation plan includes an analysis of trends in Medicaid costs associated with the SUD 1115 waiver, including total costs, SUD cost drivers, and type or source of care cost drivers. For this report we provide total costs, Federal share of Louisiana SUD waiver, cost of Medicaid beneficiaries treated in an IMD, cost of Medicaid beneficiaries' ED visits, cost of MAT, and cost of ASAM care.

Results indicate that total costs dropped significantly after the first intervention in October of 2018, which was to encourage physicians to become certified dispensers. Total costs, the costs of beneficiaries treated in an IMD, and the cost of MAT are increasing after the second intervention, which was to educate abstinence-based residential providers on the benefits of MAT. The increase in total costs appears to be driven primarily by the increase in the cost of IMD stays.

Conclusions

Interpretations, Policy Implications, and Interactions with Other State Initiatives

Overall, we conclude that activities associated with Louisiana’s Section 1115 SUD Demonstration Waiver are positively impacting the treatment of Medicaid members with an SUD in ways that are consistent with enhanced use of evidence-based care. The demonstration was associated with increased access to and utilization of MAT in Louisiana. It is likely that demonstration-related interventions interacted with LDH COVID policies (e.g., loosened restrictions on SUD services delivered through telemedicine) to expand access to MAT throughout the state. These gains appear to have been maintained in the post-COVID period through 2022. The increased MAT use for Medicaid members with SUD may also be directly related to the continued growth in the number of Medicaid providers qualified to provide buprenorphine or methadone as a part of MAT. However, our qualitative analysis surfaced several barriers to MAT uptake that will need to be addressed before MAT access can expand to more members with qualifying diagnoses for treatment.

Louisiana Medicaid has seen increased use of treatment in IMDs for SUD over the demonstration period and the average length of stay for Medicaid members with SUD treated in IMDs has increased substantially. This finding is particularly notable given the initial motivation for Louisiana’s Section 1115 SUD Demonstration Waiver application involving the restriction of federal matching funds for in-lieu of services delivered in IMDs. There are clear policy implications associated with our findings related to IMD utilization. The patterns of increased IMD use that we observed in Louisiana Medicaid are similar to those from other states that have also enacted SUD waiver demonstrations (KFF, 2019). Federal funding is a critical component in maintaining evidence-based treatment for SUD, including extended IMD stays. The increased access to and utilization of MAT and IMD services has also caused an increase in total costs of the demonstration.

The evaluation team generally found increased use of services associated with various ASAM levels of care for SUD treatment over the demonstration period. In particular, we observed large increases in outpatient service use for SUD (ASAM Level 1), which also appeared to be impacted by the COVID-19 pandemic and associated policy changes. One potential policy-related challenge to improving evidence-based OUD/SUD patient placement was the continuous coverage requirement (CCR) that followed the COVID-19 public health emergency. As a result of the CCR, Louisiana Medicaid enrollment grew from just over 1.5 million in March 2020 to nearly 2 million in May 2023 (KFF, 2024). It’s unlikely that this growth in enrollment was met with expanded capacity to provide SUD treatment services for those newly gaining coverage.

Louisiana Medicaid currently maintains some of the highest national rates of initiation and engagement in AUD/ODU treatment. We found overall improvements for initiation of and engagement with treatment for alcohol abuse or dependence, opioid abuse or dependence, and other drug use or dependence, though those improvements tended to arise from a continuation of trends that pre-dated the demonstration period.

Finally, despite the gains in MAT use, IMD utilization, and evidence-based OUD/SUD patient placement, there were substantial increases in both the count of drug overdose deaths and the share of Medicaid members dying from a drug overdose in Louisiana over the demonstration period. These increases became much more pronounced during the early stages of the COVID-19 pandemic and following the widespread proliferation of fentanyl.

Lessons Learned and Recommendations

Louisiana already had an established and complete SUD continuum of care and did not add any levels of care with the SUD 1115 demonstration waiver. One benefit of the SUD 1115 waiver has been additional data to monitor and evaluate the SUD continuum of care in the Medicaid program. For example, Medicaid enrollee access to MOUD has clearly increased since 2018, the first year of the waiver. The CMS requirement of having residential facilities offer onsite or facilitate offsite access to MAT that was incorporated into provider policies in 2019 contributed to the observed increase in access to MOUD. Other lessons learned include the importance of excellent teamwork among Medicaid and behavioral health staff, including data, clinical, and administrative team members, to provide CMS and the independent evaluator with the information needed to fulfill the STCs and have a successful demonstration.

Recommendations:

1. Given the scale of data and reporting required, Louisiana recommends that states embarking on an SUD 1115 demonstration waiver develop and implement multiple internal data and process checks to ensure accurate and complete data is given to CMS and the state's independent evaluator of the waiver.
2. As an early adopter of the SUD 1115 demonstration waiver, Louisiana consulted with a limited number of states very early in the SUD 1115 waiver post-approval process about their experiences in fulfilling STC requirements to better understand the processes and deliverables involved. Fortunately, there are now many examples of SUD 1115 demonstration waiver documents posted online by states with existing SUD 1115 waivers that are helpful for states to use as references.

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Attachment 1 (Detailed Results)

Appendix Figure 1 - Number of Beneficiaries with a Substance Use Disorder

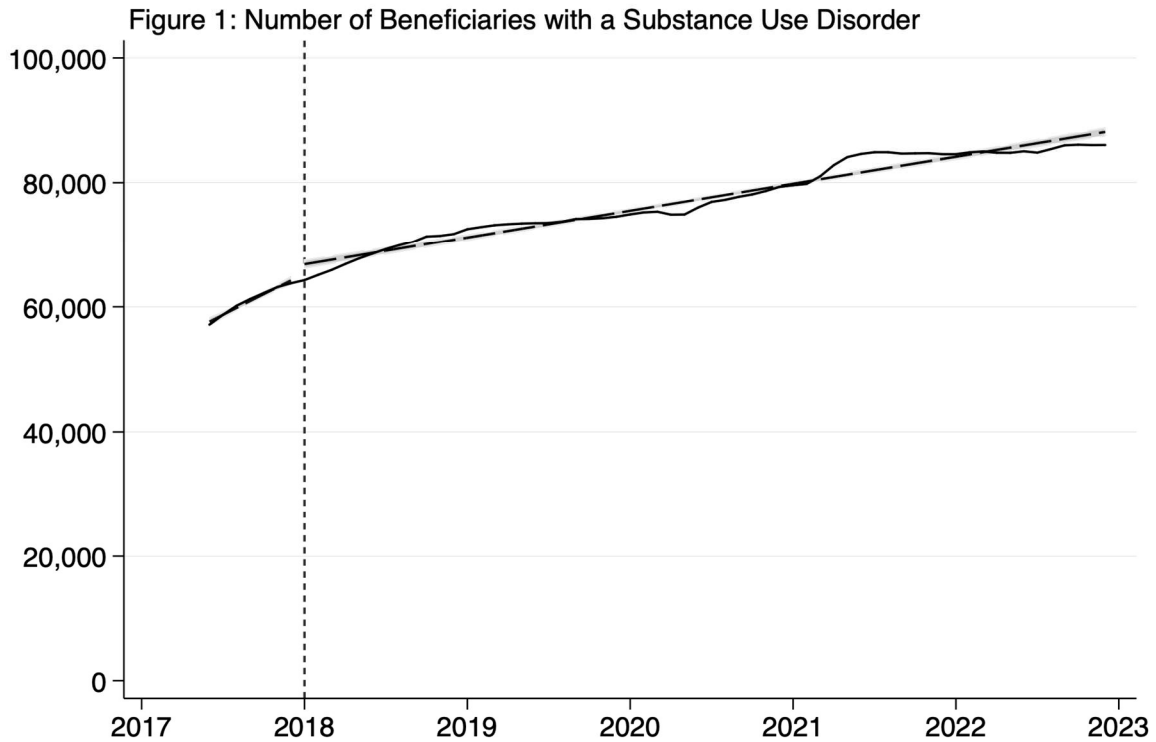
Evaluation Demonstration Goal 0.0

Monitoring Metric: #3, Number of Medicaid Beneficiaries with an SUD

Description: Medicaid Beneficiaries with SUD Diagnosis (monthly)

Primary Driver: N/A

Secondary Driver: N/A



Notes: Number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an OUD/SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 1: Number of Beneficiaries with a Substance Use Disorder

	b/se/ci95
Pre-Period Slope	1096.96*** (65.94) [967.73,1226.20]
Level Change	1519.89** (596.92) [349.95,2689.83]
Post-Period Slope	361.45*** (21.42) [319.47,403.42]
Slope Change	-735.52*** (74.21) [-880.97,-590.07]
Pre-Period Mean	60912.14
Pre-Period Min	57144
Pre-Period Max	63760
Post-Period Mean	77482.53
Post-Period Min	64260
Post-Period Max	86088
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 2 – Percent of Beneficiaries with a Substance Use Disorder

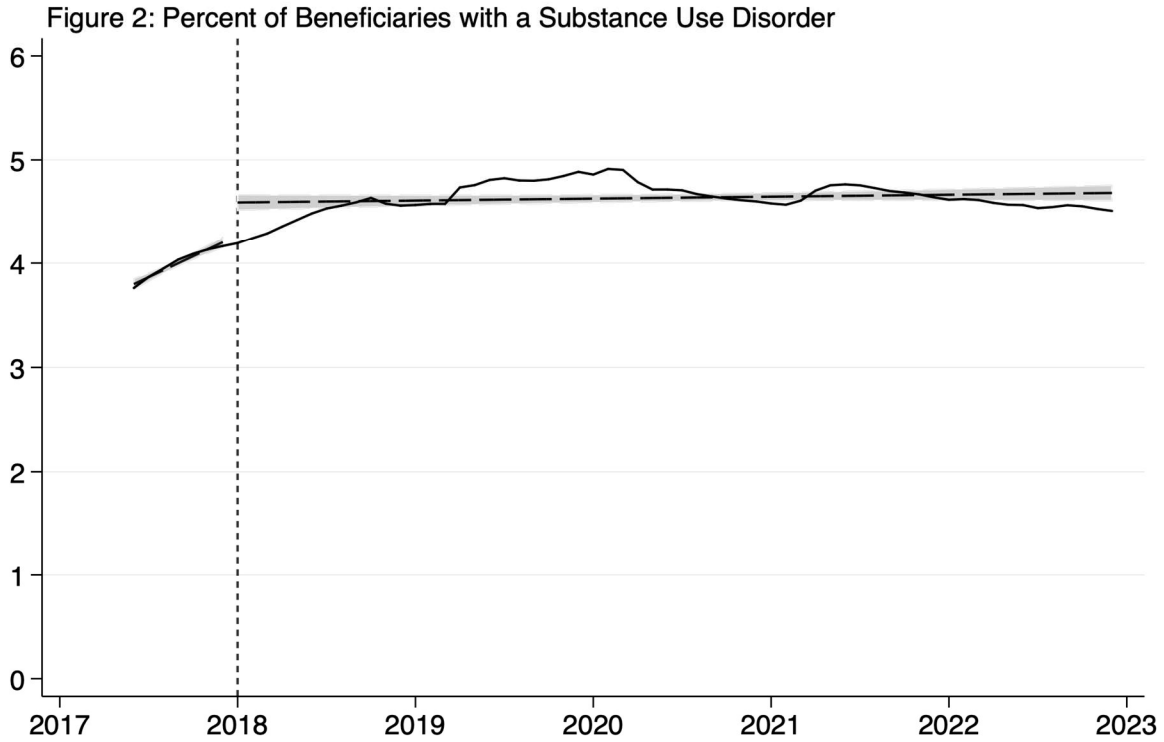
Evaluation Demonstration Goal 0.0 (supplement)

Monitoring Metric: N/A

Description: Percent of Medicaid Beneficiaries with SUD Diagnosis (monthly)

Primary Driver: N/A

Secondary Driver: N/A



Notes: The numerator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an OUD/SUD diagnosis code as the primary diagnosis. The denominator is the number of unduplicated Medicaid beneficiaries eligible for the demonstration. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 2: Percent of Medicaid Beneficiaries with a Substance Use Disorder

	b/se/ci95
Pre-Period Slope	0.067*** (0.005) [0.057,0.078]
Level Change	0.322*** (0.097) [0.132,0.511]
Post-Period Slope	0.002 (0.003) [-0.004,0.007]
Slope Change	-0.066*** (0.007) [-0.079,-0.052]
Pre-Period Mean	4.00
Pre-Period Min	3.76
Pre-Period Max	4.16
Post-Period Mean	4.64
Post-Period Min	4.19
Post-Period Max	4.91
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 3 – Number of Medicaid Beneficiaries Treated in an IMD for SUD

Evaluation Demonstration Goal 1.1

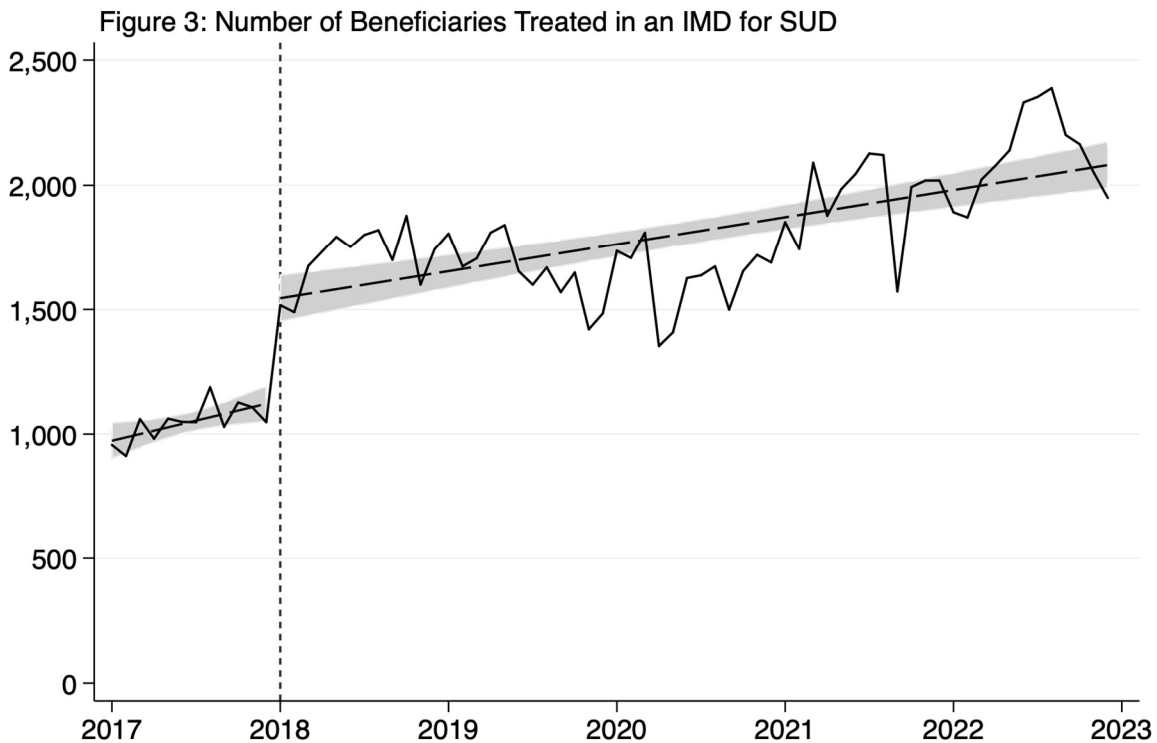
Monitoring Metric: #5, Medicaid Beneficiaries Treated in an IMD for SUD

Description: Number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: Number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 3: Number of Medicaid Beneficiaries Treated in an IMD for SUD

	b/se/ci95
Pre-Period Slope	13.45*** (3.24) [7.09,19.80]
Level Change	409.89*** (84.39) [244.49,575.29]
Post-Period Slope	9.09*** (2.24) [4.69,13.48]
Slope Change	-4.36 (3.86) [-11.92,3.20]
Pre-Period Mean	1047.50
Pre-Period Min	912
Pre-Period Max	1188
Post-Period Mean	1812.87
Post-Period Min	1353
Post-Period Max	2388
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 3a – Number of Beneficiaries Treated in an IM for SUD – COVID Adjustment

Evaluation Demonstration Goal 1.1

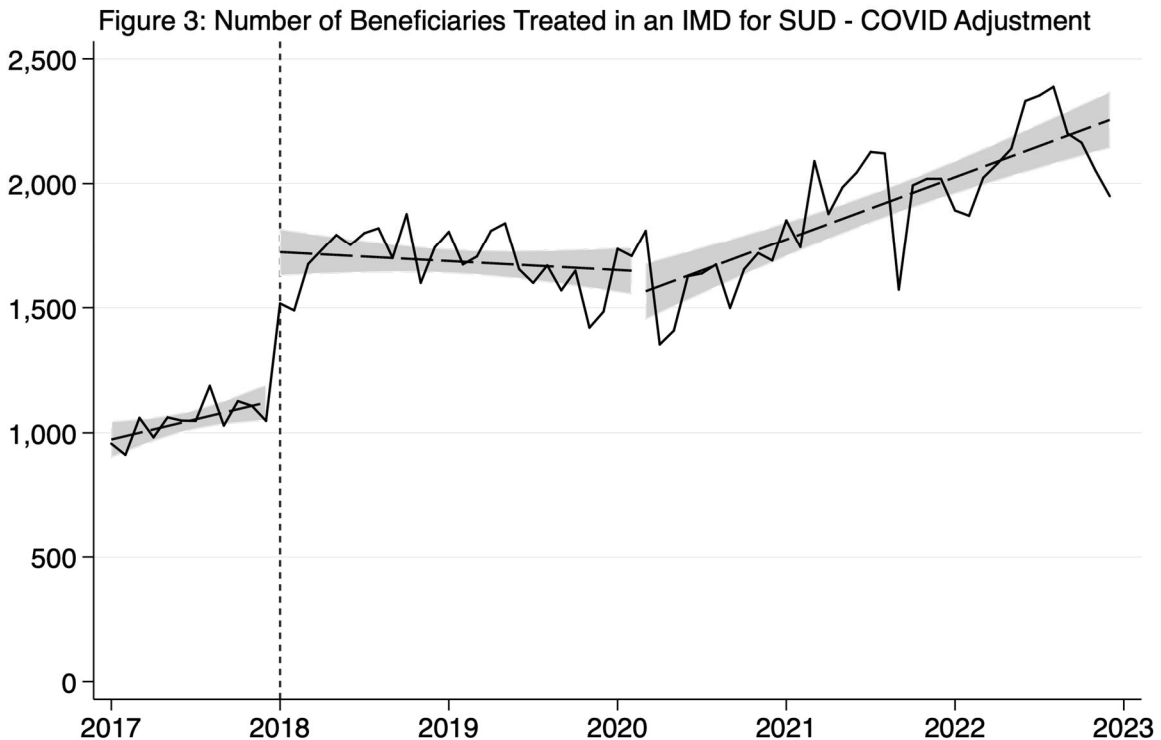
Monitoring Metric: #5, Medicaid Beneficiaries Treated in an IMD for SUD

Description: Number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: Number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider. Intervention date was assigned to the first quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 3a: Number of Medicaid Beneficiaries Treated in an IMD for SUD - COVID Adjustment

	b/se/ci95
Pre-Period Slope	13.45*** (3.29) [7.00,19.90]
Demonstration Level Change	587.82*** (59.54) [471.13,704.51]
Post-Demonstration Slope	-2.99 (4.60) [-12.01,6.03]
Post-Demonstration Slope Change	-16.44** (6.85) [-29.87,-3.01]
COVID Level Change	-79.38 (89.22) [-254.26,95.49]
Post-COVID Slope	20.90*** (3.38) [14.28,27.53]
Post-COVID Slope Change	23.90*** (5.60) [12.93,34.87]
Pre-Period Mean	1047.50
Pre-Period Min	912
Pre-Period Max	1188
Post-Period Mean	1812.87
Post-Period Min	1353
Post-Period Max	2388
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 4 – Percent of Beneficiaries with an SUD Treated in an IMD

Evaluation Demonstration Goal 1.1

Monitoring Metric: N/A

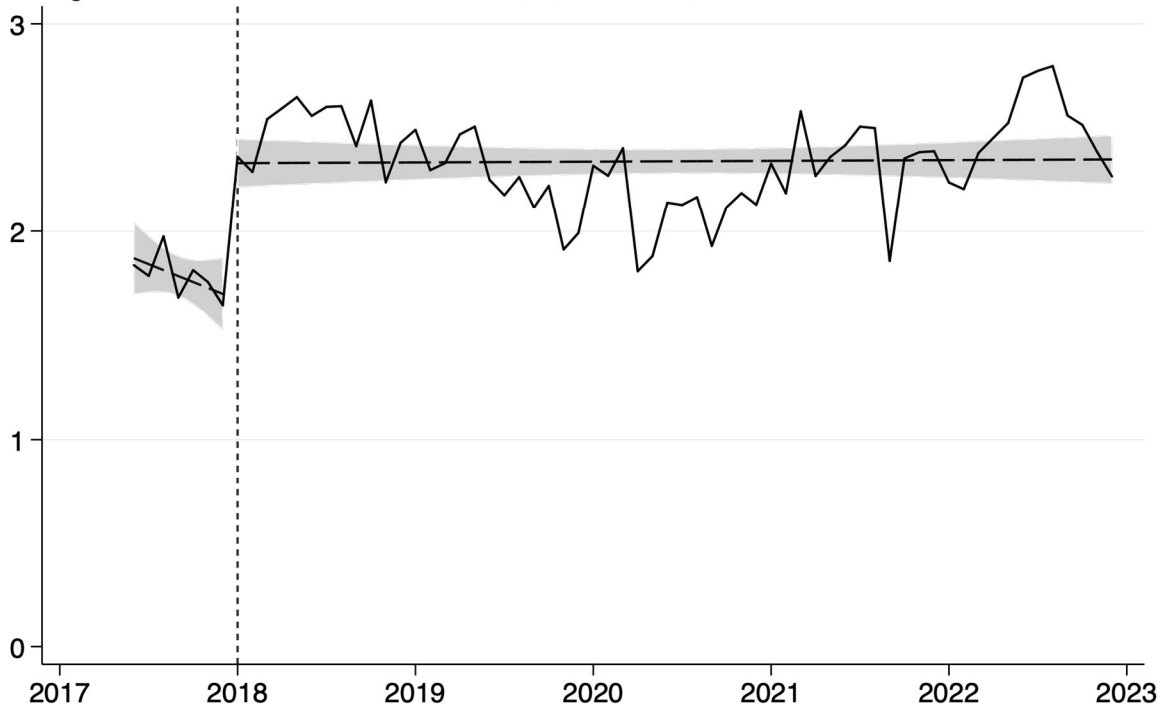
Description: Percent of unduplicated Medicaid Beneficiaries with an SUD enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 4: Percent of Beneficiaries with an SUD Treated in an IMD



Notes: The numerator is the number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in

a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 4: Percent of Beneficiaries with an SUD Treated in an IMD

	b/se/ci95
Pre-Period Slope	-0.029*** (0.007)
Level Change	[-0.042,-0.015] 0.660*** (0.113)
Post-Period Slope	[0.439,0.882] 0.000 (0.003)
Slope Change	[-0.006,0.006] 0.029*** (0.007)
	[0.015,0.043]
Pre-Period Mean	1.78
Pre-Period Min	1.64
Pre-Period Max	1.97
Post-Period Mean	2.34
Post-Period Min	1.81
Post-Period Max	2.80
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 4a – Percent of Beneficiaries with an SUD Treated in an IMD – COVID Adjustment

Evaluation Demonstration Goal 1.1

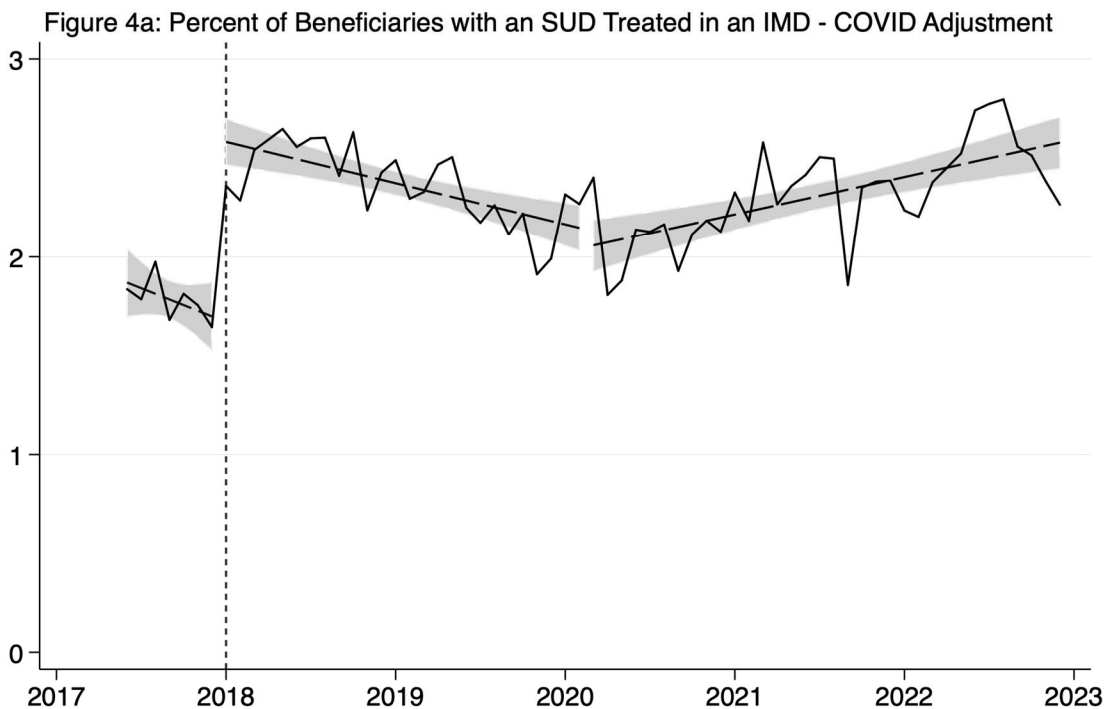
Monitoring Metric: N/A

Description: Percent of unduplicated Medicaid Beneficiaries with an SUD enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The numerator is the number of unduplicated beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis from an IMD provider. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD

diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 4a: Percent of Medicaid Beneficiaries Treated in an IMD for SUD - COVID Adjustment

	b/se/ci95
Pre-Period Slope	-0.029*** (0.007) [-0.042,-0.015]
Demonstration Level Change	0.913*** (0.070) [0.777,1.049]
Post-Demonstration Slope	-0.017*** (0.005) [-0.027,-0.008]
Post-Demonstration Slope Change	0.011 (0.010) [-0.008,0.030]
COVID Level Change	-0.073 (0.092) [-0.253,0.108]
Post-COVID Slope	0.016*** (0.004) [0.008,0.023]
Post-COVID Slope Change	0.033*** (0.006) [0.021,0.045]
Pre-Period Mean	1.78
Pre-Period Min	1.64
Pre-Period Max	1.97
Post-Period Mean	2.34
Post-Period Min	1.81
Post-Period Max	2.80
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 5 – Average Length of Stay in IMDs

Evaluation Demonstration Goal 1.1

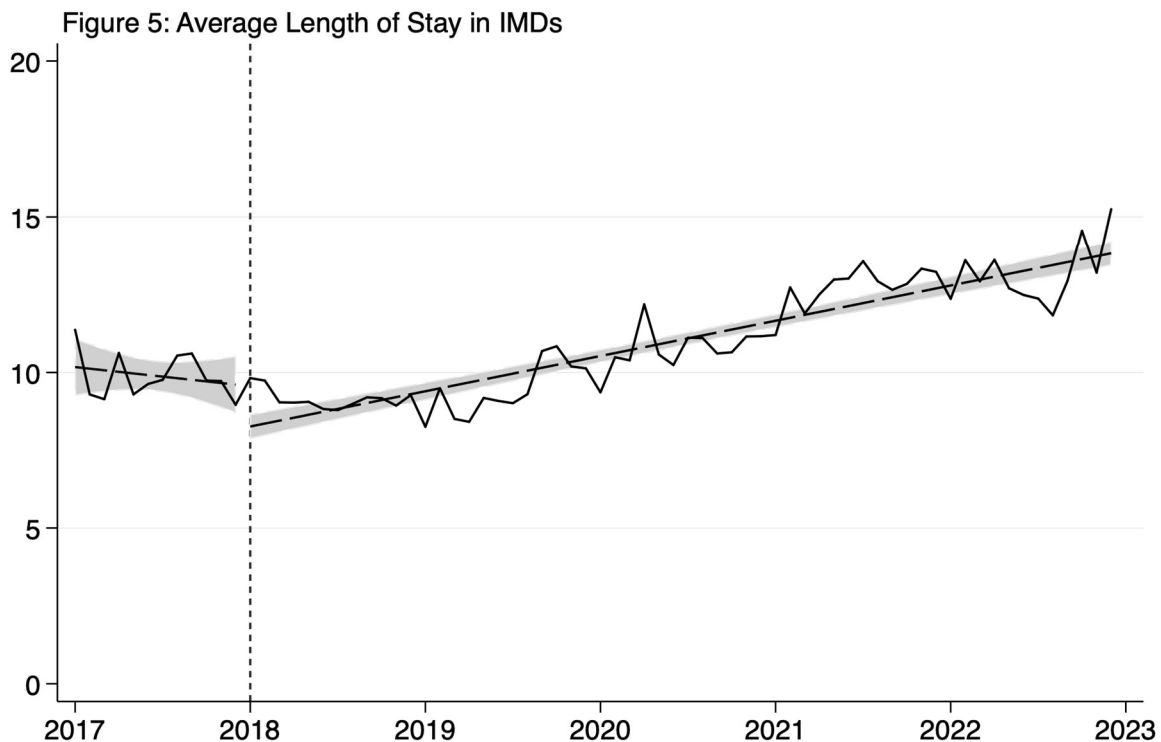
Monitoring Metric: #36, Average Length of Stay in IMDs

Description: The average length of stay for beneficiaries discharged from IMD inpatient/residential treatment for SUD

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: Average length of stay for Medicaid beneficiaries with SUD treated in an IMD. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 5: Average Length of Stay in IMDs

	b/se/ci95
Pre-Period Slope	-0.051 (0.040)
Level Change	[-0.129,0.027] -1.288*** (0.485)
Post-Period Slope	[-2.239,-0.337] 0.094*** (0.009)
Slope Change	[0.075,0.112] 0.145*** (0.039) [0.068,0.221]
Pre-Period Mean	9.89
Pre-Period Min	8.97
Pre-Period Max	11.36
Post-Period Mean	11.04
Post-Period Min	8.27
Post-Period Max	15.25
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 6 – Number of Beneficiaries Using Early Intervention Services (ASAM 0.5)

Evaluation Demonstration Goal 1.1

Monitoring Metric: #7, Early Intervention (ASAM 0.5)

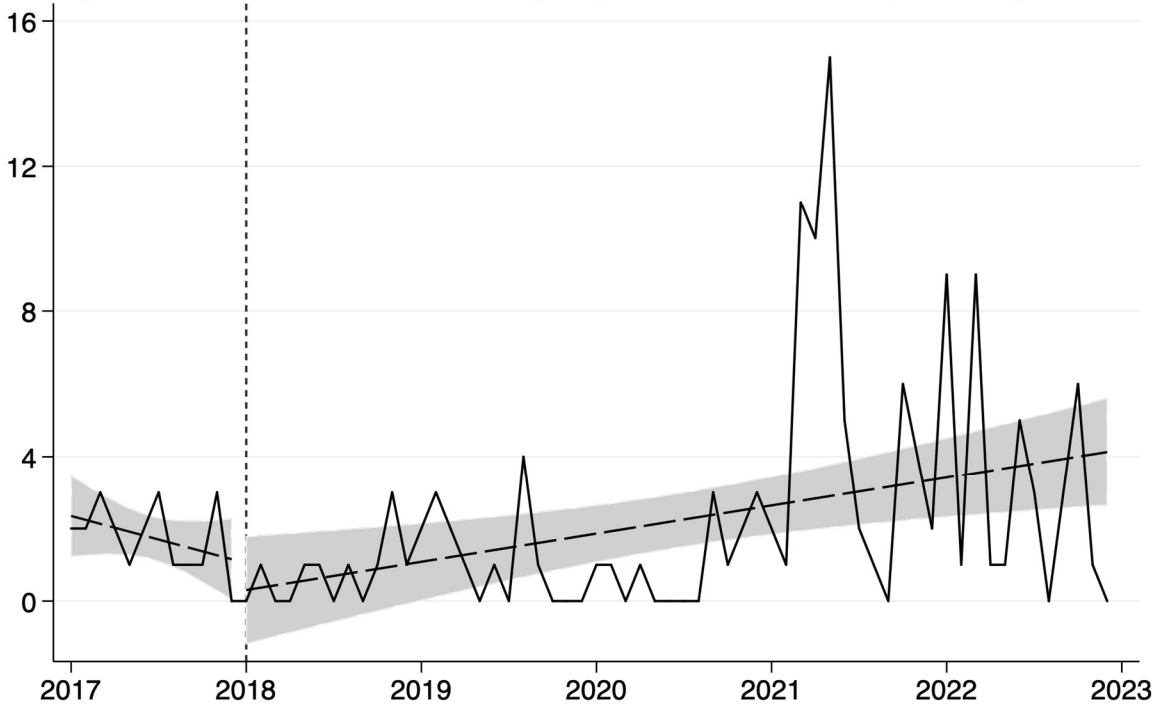
Description: Number of beneficiaries who used early intervention services (such as procedure codes associated with SBIRT) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 6: Number of Beneficiaries Using Early Intervention Services (ASAM 0.5)



Notes: The total number of unduplicated beneficiaries with a service claim for early intervention services (such as procedure codes associated with SBIRT) during the measurement period. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 6: Number of Beneficiaries Using Early Intervention Services (ASAM 0.5)

	b/se/ci95
Pre-Period Slope	-0.108*** (0.029) [-0.165,-0.052]
Level Change	-0.741 (0.507) [-1.734,0.252]
Post-Period Slope	0.065*** (0.021) [0.024,0.106]
Slope Change	0.173*** (0.036) [0.104,0.243]
Pre-Period Mean	1.75
Pre-Period Min	0
Pre-Period Max	3
Post-Period Mean	2.22
Post-Period Min	0
Post-Period Max	15
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 7 – Percent of SUD Beneficiaries Using Early Intervention Services (ASAM 0.5)

Evaluation Demonstration Goal 1.1

Monitoring Metric: N/A

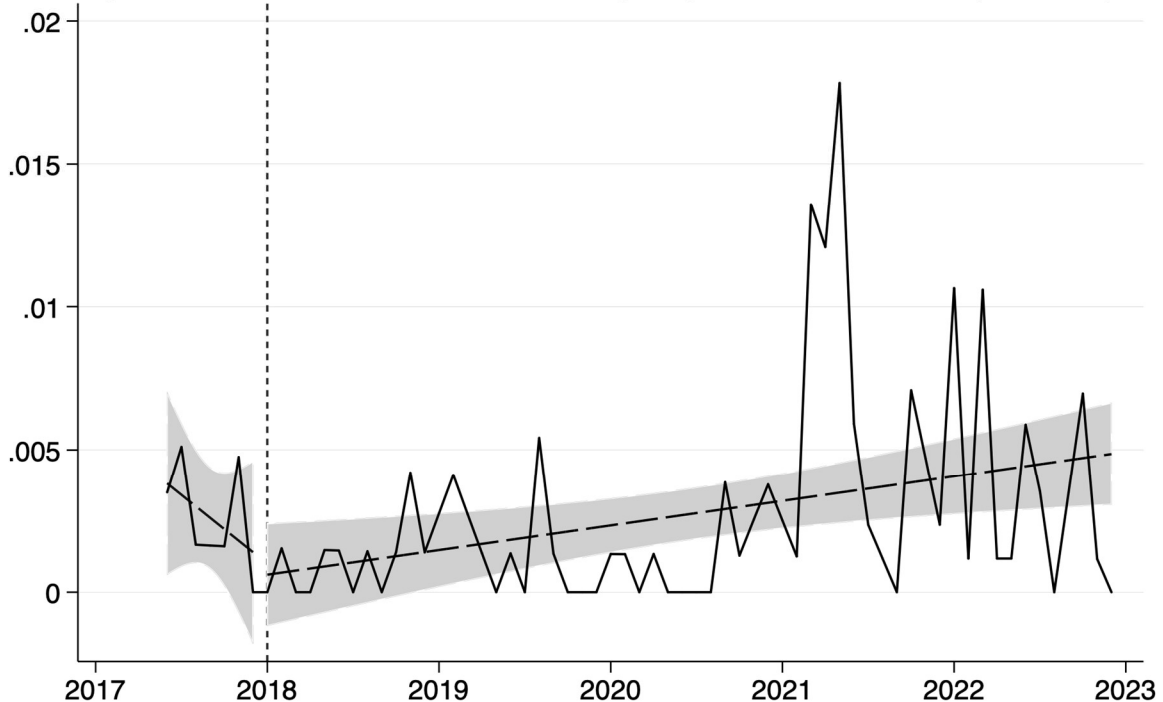
Description: Percent of beneficiaries who used early intervention services (such as procedure codes associated with SBIRT) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 7: Percent of SUD Beneficiaries Using Early Intervention Services (ASAM 0.5)



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for early intervention services (such as procedure codes associated with SBIRT) during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 7: Percent of SUD Beneficiaries Using Early Intervention Services (ASAM 0.5)

	b/se/ci95
Pre-Period Slope	-0.0004*** (0.0001) [-0.0006,-0.0002]
Level Change	-0.0004 (0.0008) [-0.0020,0.0012]
Post-Period Slope	0.0001*** (0.0000) [0.0000,0.0001]
Slope Change	0.0005*** (0.0001) [0.0002,0.0007]
Pre-Period Mean	0.0026
Pre-Period Min	0.0000
Pre-Period Max	0.0051
Post-Period Mean	0.0027
Post-Period Min	0.0000
Post-Period Max	0.0178
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 8 – Number of Beneficiaries Using Outpatient Services for SUD (ASAM 1)

Evaluation Demonstration Goal 1.1

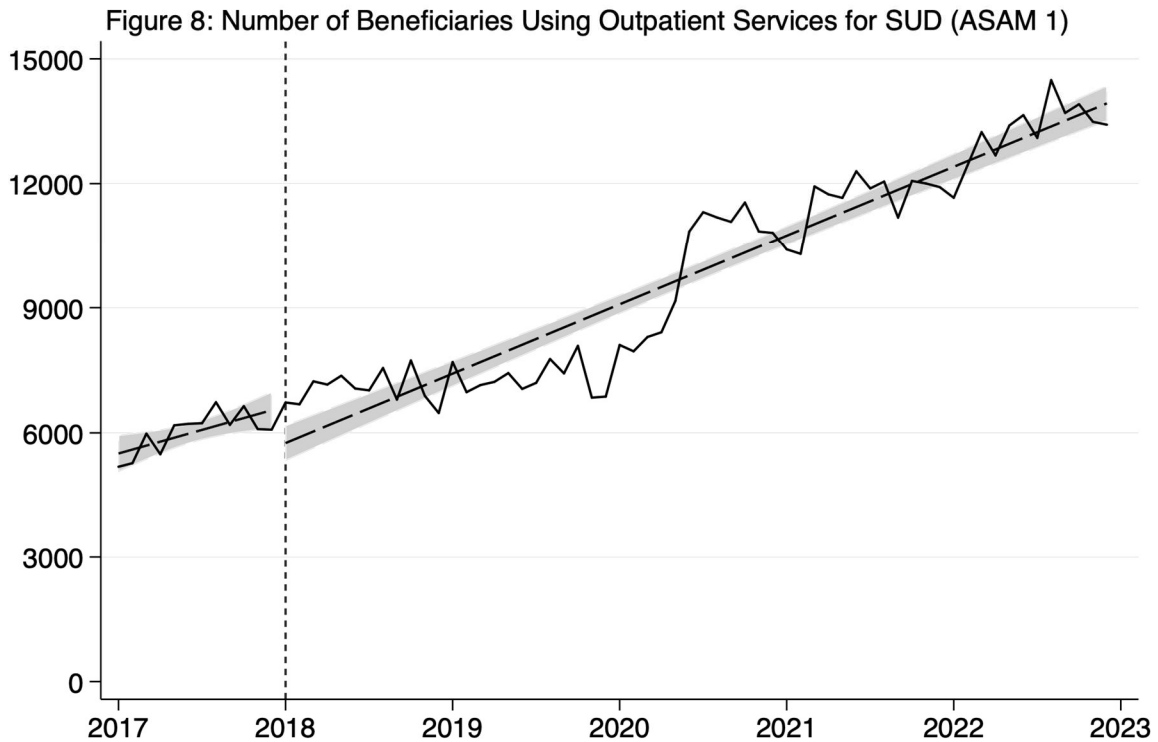
Monitoring Metric: #8, Outpatient Services (ASAM 1)

Description: Number of beneficiaries who used outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The total number of unduplicated beneficiaries with a service claim for outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 8: Number of Beneficiaries Using Outpatient Services for SUD (ASAM 1)

	b/se/ci95
Pre-Period Slope	94.17*** (29.24)
Level Change	[36.86,151.48] -880.59 (560.45)
Post-Period Slope	[-1979.05,217.86] 138.50*** (9.83)
Slope Change	[119.22,157.77] 44.33 (27.76)
	[-10.09,98.74]
Pre-Period Mean	6025.42
Pre-Period Min	5189
Pre-Period Max	6735
Post-Period Mean	9842.62
Post-Period Min	6476
Post-Period Max	14488
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 8a – Number of Beneficiaries Using Outpatient Services for SUD (ASAM 1) – COVID Adjustment

Evaluation Demonstration Goal 1.1

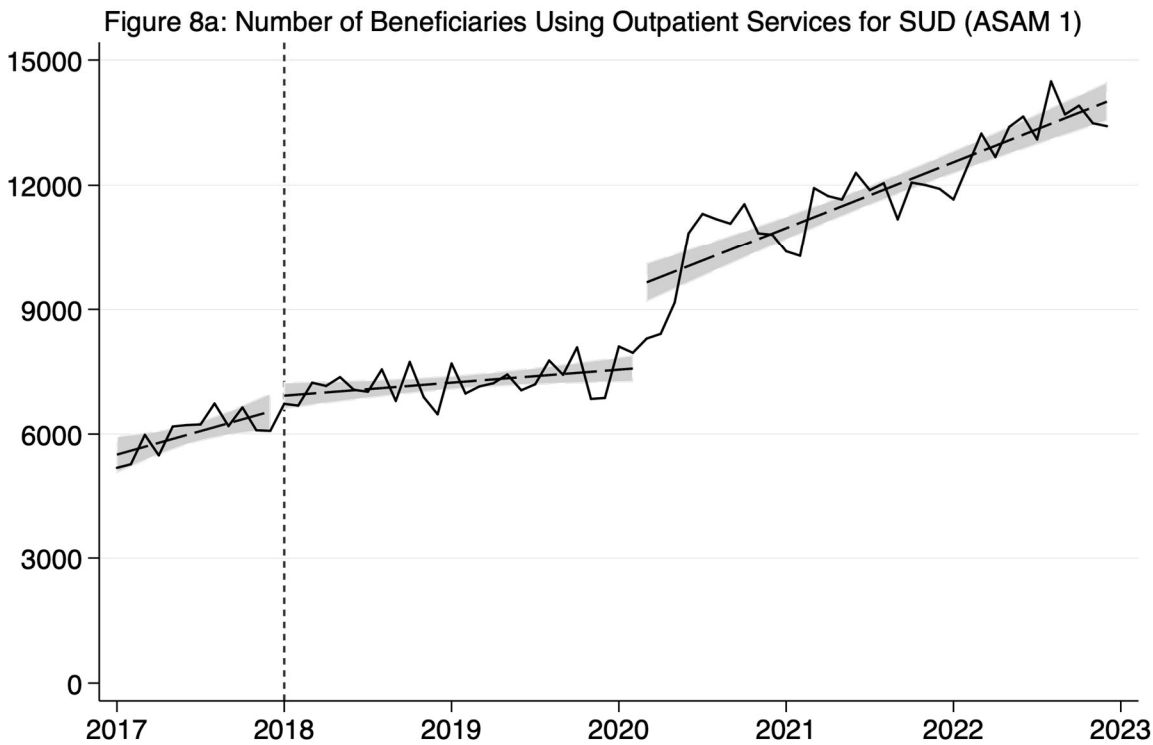
Monitoring Metric: #8, Outpatient Services (ASAM 1)

Description: Number of beneficiaries who used outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The total number of unduplicated beneficiaries with a service claim for outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients)

during the measurement period. Intervention date was assigned to the first quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 8a: Number of Beneficiaries Using Outpatient Services for SUD (ASAM 1) - COVID Adjustment

	b/se/ci95
Pre-Period Slope	94.17*** (29.68) [36.00,152.34]
Demonstration Level Change	286.23 (234.74) [-173.85,746.31]
Post-Demonstration Slope	26.07*** (6.46) [13.42,38.73]
Post-Demonstration Slope Change	-68.10** (31.34) [-129.52,-6.67]
COVID Level Change	2047.36*** (429.33) [1205.88,2888.84]
Post-COVID Slope	131.90*** (17.30) [97.99,165.81]
Post-COVID Slope Change	105.83*** (16.63) [73.23,138.43]
Pre-Period Mean	6025.42
Pre-Period Min	5189
Pre-Period Max	6735
Post-Period Mean	9842.62
Post-Period Min	6476
Post-Period Max	14488
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 9 – Percent of SUD Beneficiaries Using Outpatient Services for SUD (ASAM 1)

Evaluation Demonstration Goal 1.1

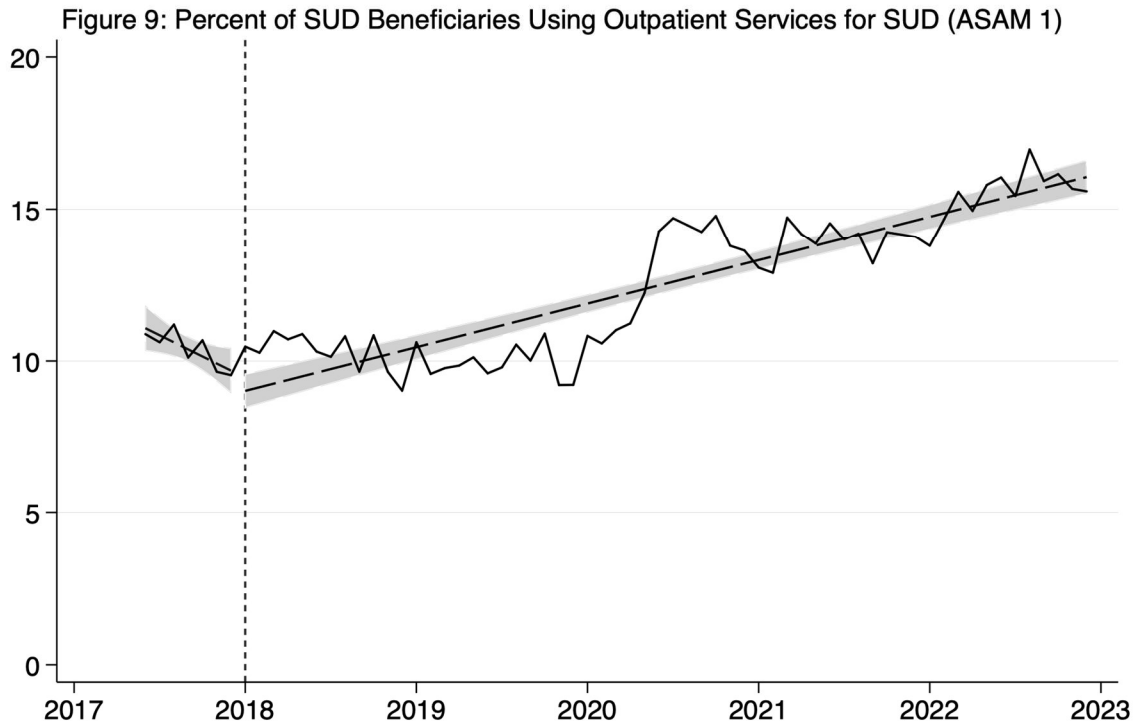
Monitoring Metric: N/A

Description: Percent of beneficiaries who used outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting

month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 9: Percent of SUD Beneficiaries Using Outpatient Services for SUD (ASAM 1)

	b/se/ci95
Pre-Period Slope	-0.232*** (0.037) [-0.304,-0.159]
Level Change	-0.434 (0.654) [-1.717,0.848]
Post-Period Slope	0.119*** (0.013) [0.093,0.145]
Slope Change	0.351*** (0.036) [0.281,0.421]
Pre-Period Mean	10.38
Pre-Period Min	9.53
Pre-Period Max	11.19
Post-Period Mean	12.54
Post-Period Min	9.03
Post-Period Max	16.97
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 9a – Percent of SUD Beneficiaries Using Outpatient Services for SUD (ASAM 1) – COVID Adjustment

Evaluation Demonstration Goal 1.1

Monitoring Metric: N/A

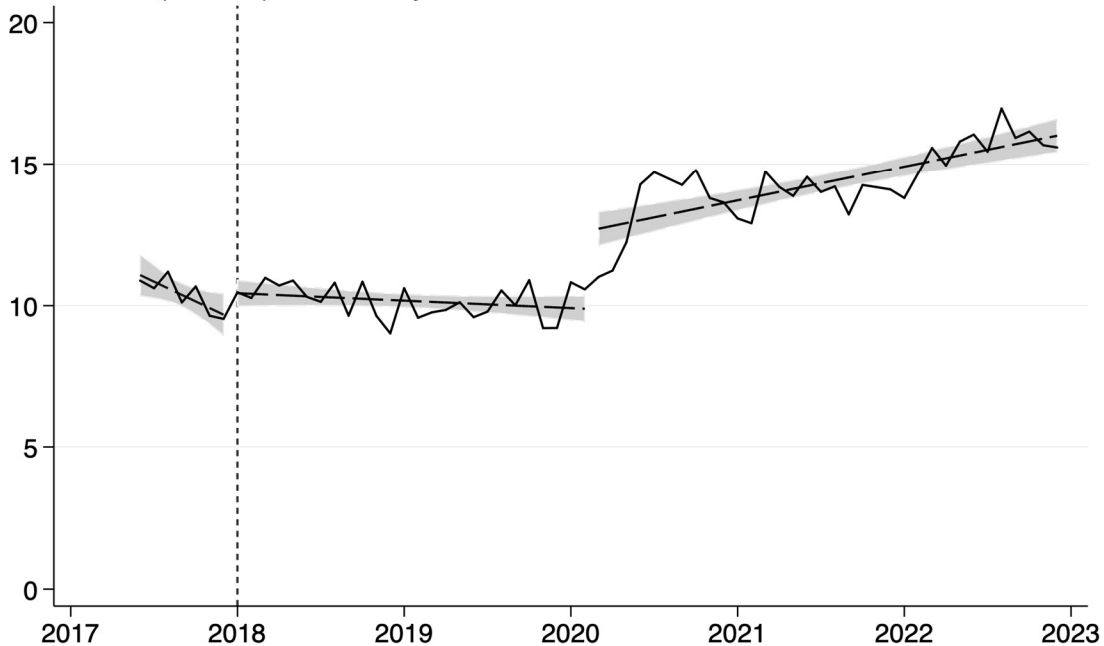
Description: Percent of beneficiaries who used outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 9a: Percent of SUD Beneficiaries Using Outpatient Services for SUD (ASAM 1) - COVID Adjustment



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for outpatient services for SUD (such as outpatient recovery or motivational enhancement therapies, step down care, and monitoring for stable patients) during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first

quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

*Appendix Table 9a: Percent of SUD Beneficiaries Using Outpatient Services for SUD (ASAM 1)
- COVID Adjustment*

	b/se/ci95
Pre-Period Slope	-0.232*** (0.038)
Demonstration Level Change	[-0.305,-0.158] 0.985*** (0.275)
Post-Demonstration Slope	[0.445,1.525] -0.022* (0.013)
Post-Demonstration Slope Change	[-0.047,0.003] 0.210*** (0.038)
COVID Level Change	[0.135,0.284] 2.833*** (0.617)
Post-COVID Slope	[1.624,4.042] 0.100*** (0.023)
Post-COVID Slope Change	[0.055,0.146] 0.122*** (0.023)
	[0.077,0.167]
Pre-Period Mean	10.38
Pre-Period Min	9.53
Pre-Period Max	11.19
Post-Period Mean	12.54
Post-Period Min	9.03
Post-Period Max	16.97
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 10 – Number of Beneficiaries Using Intensive Outpatient and/or Partial Hospitalization Services for SUD (ASAM 2)

Evaluation Demonstration Goal 1.1

Monitoring Metric: #9, Intensive Outpatient and Partial Hospitalization (ASAM 2)

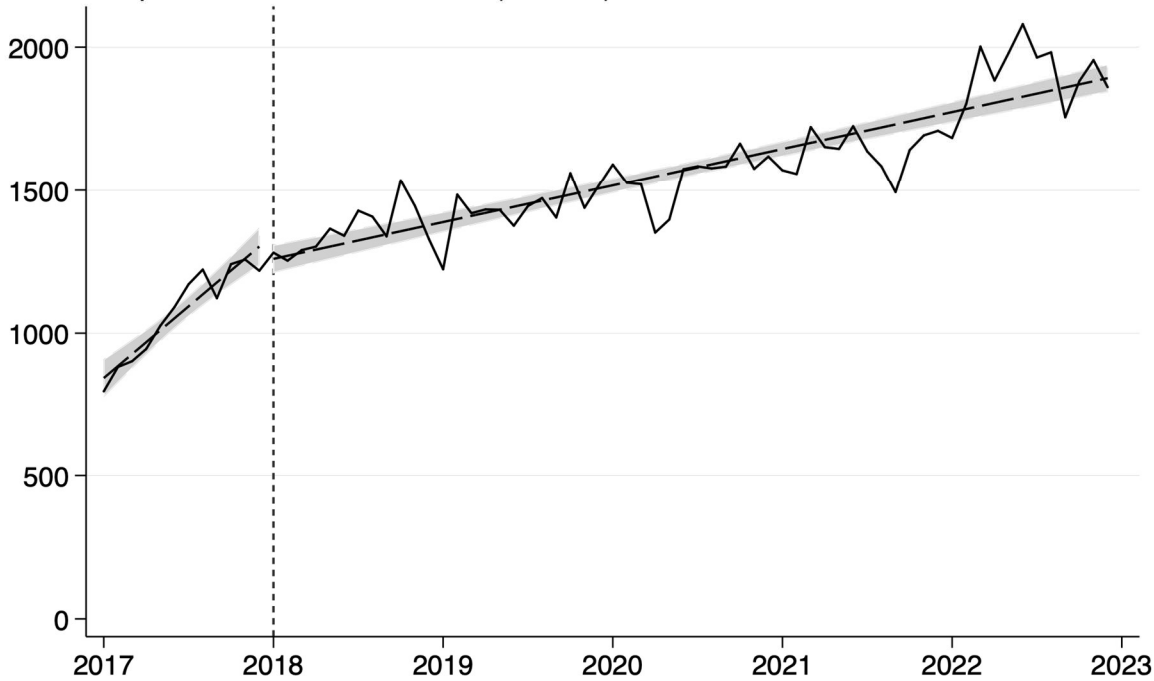
Description: Number of beneficiaries who used intensive outpatient and/or partial hospitalization services for SUD (such as specialized outpatient SUD therapy or other clinical services) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 10: Number of Beneficiaries Using Intensive Outpatient and/or Partial Hospitalization Services for SUD (ASAM 2)



Notes: The total number of unduplicated beneficiaries with a service claim for intensive outpatient and/or partial hospitalization services for SUD (such as specialized outpatient SUD therapy or other clinical services) during the measurement period. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 10: Number of Beneficiaries Using Intensive Outpatient and/or Partial Hospitalization Services for SUD (ASAM 2)

	b/se/ci95
Pre-Period Slope	41.72*** (4.20) [33.50,49.95]
Level Change	-84.63* (44.32) [-171.50,2.25]
Post-Period Slope	10.72*** (1.19) [8.40,13.05]
Slope Change	-31.00*** (4.33) [-39.49,-22.51]
Pre-Period Mean	1072.83
Pre-Period Min	797
Pre-Period Max	1257
Post-Period Mean	1575.73
Post-Period Min	1223
Post-Period Max	2080
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 11 – Percent of SUD Beneficiaries Using Intensive Outpatient and/or Partial Hospitalization Services for SUD (ASAM 2)

Evaluation Demonstration Goal 1.1

Monitoring Metric: N/A

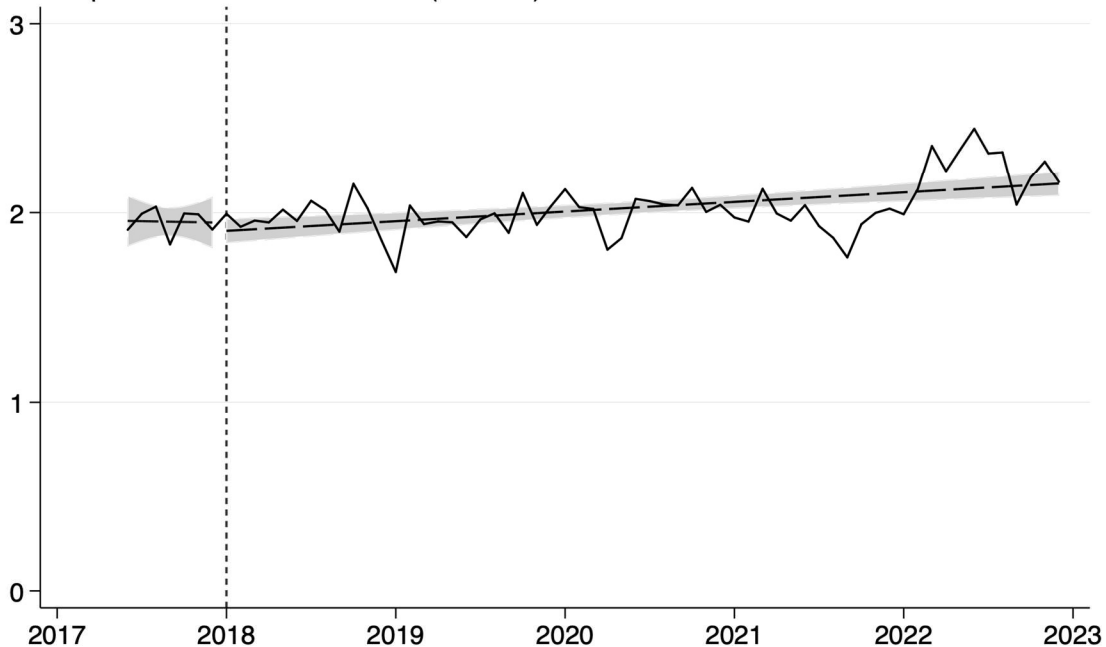
Description: Percent of beneficiaries who used intensive outpatient and/or partial hospitalization services for SUD (such as specialized outpatient SUD therapy or other clinical services) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 11: Percent of SUD Beneficiaries Using Intensive Outpatient and/or Partial Hospitalization Services for SUD (ASAM 2)



Notes:

The numerator is the total number of unduplicated beneficiaries with a service claim for intensive outpatient and/or partial hospitalization services for SUD (such as specialized outpatient SUD therapy or other clinical services) during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD

diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 11: Percent of SUD Beneficiaries Using Intensive Outpatient and/or Partial Hospitalization Services for SUD (ASAM 2)

	b/se/ci95
Pre-Period Slope	-0.001 (0.004) [-0.009,0.007]
Level Change	-0.043 (0.043) [-0.128,0.042]
Post-Period Slope	0.004** (0.002) [0.001,0.008]
Slope Change	0.006 (0.004) [-0.003,0.014]
Pre-Period Mean	1.95
Pre-Period Min	1.83
Pre-Period Max	2.03
Post-Period Mean	2.03
Post-Period Min	1.69
Post-Period Max	2
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 12 – Number of Beneficiaries Using Residential and/or Inpatient Services for SUD (ASAM 3)

Evaluation Demonstration Goal 1.1

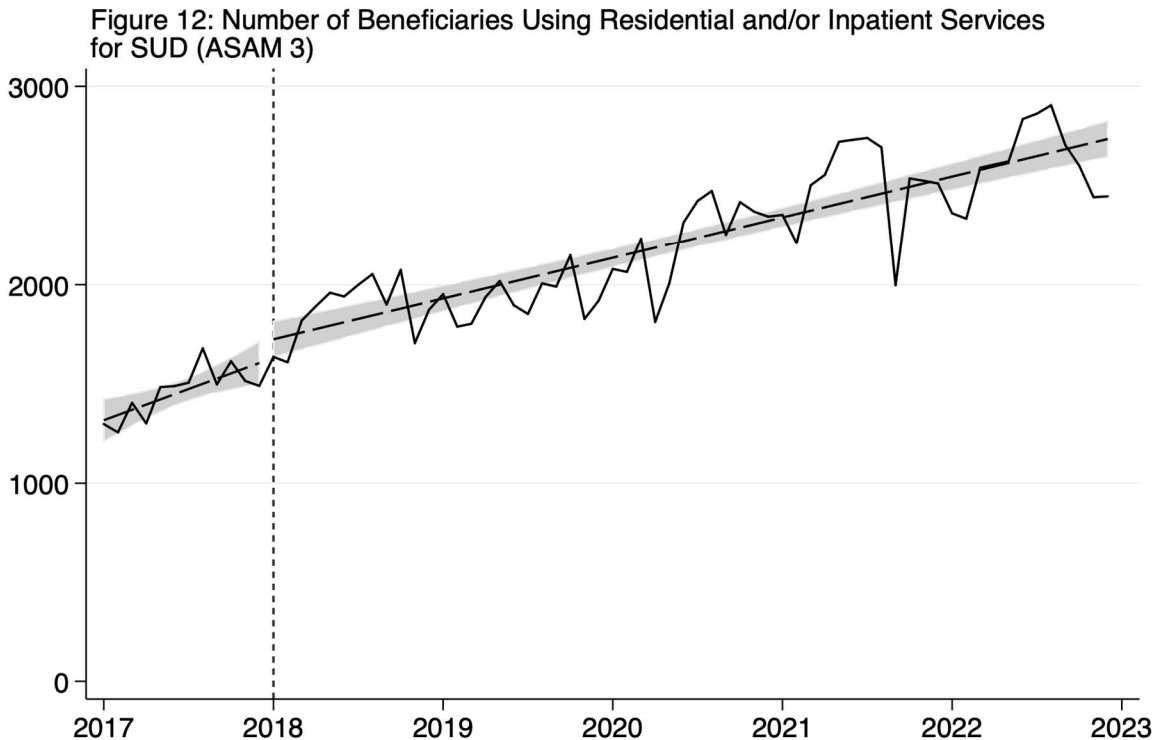
Monitoring Metric: #10, Residential and Inpatient Services (ASAM 3)

Description: Number of beneficiaries who used residential and/or inpatient services for SUD during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The total number of unduplicated beneficiaries with a service claim for residential and/or inpatient services for SUD during the measurement period. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 12: Number of Beneficiaries Using Residential and/or Inpatient Services for SUD (ASAM 3)

	b/se/ci95
Pre-Period Slope	26.18*** (6.32) [13.80,38.57]
Level Change	93.28 (74.23) [-52.21,238.77]
Post-Period Slope	17.14*** (1.73) [13.74,20.54]
Slope Change	-9.04 (6.65) [-22.08,4.00]
Pre-Period Mean	1461.17
Pre-Period Min	1256
Pre-Period Max	1679
Post-Period Mean	2230.20
Post-Period Min	1609
Post-Period Max	2905
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 13 – Percent of SUD Beneficiaries Using Residential and/or Inpatient Services for SUD (ASAM 3)

Evaluation Demonstration Goal 1.1

Monitoring Metric: N/A

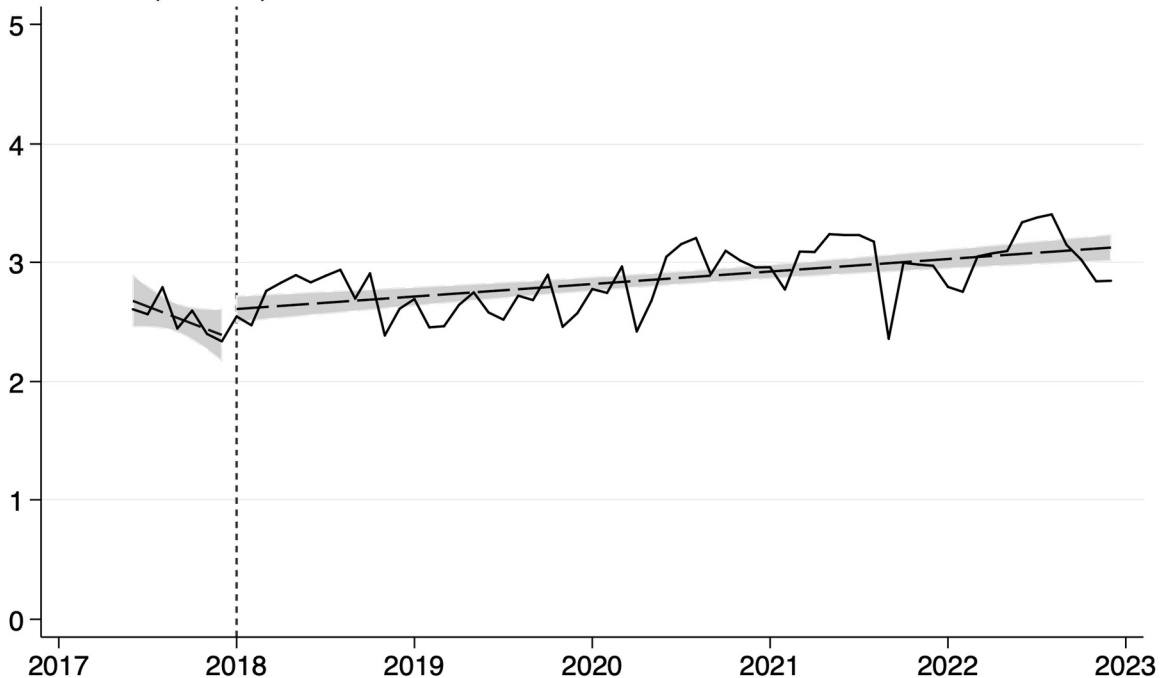
Description: Percent of beneficiaries who used residential and/or inpatient services for SUD during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 13: Percent of SUD Beneficiaries Using Residential and/or Inpatient Services for SUD (ASAM 3)



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for residential and/or inpatient services for SUD during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting

month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 13: Percent of SUD Beneficiaries Using Residential and/or Inpatient Services for SUD (ASAM 3)

	b/se/ci95
Pre-Period Slope	-0.048*** (0.011)
	[-0.070,-0.025]
Level Change	0.265*** (0.092)
	[0.084,0.446]
Post-Period Slope	0.009*** (0.002)
	[0.004,0.013]
Slope Change	0.056*** (0.011)
	[0.034,0.079]
Pre-Period Mean	2.53
Pre-Period Min	2.34
Pre-Period Max	2.79
Post-Period Mean	2.87
Post-Period Min	2.36
Post-Period Max	3
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 14 – Number of Beneficiaries Using Withdrawal Management for SUD

Evaluation Demonstration Goal 1.1

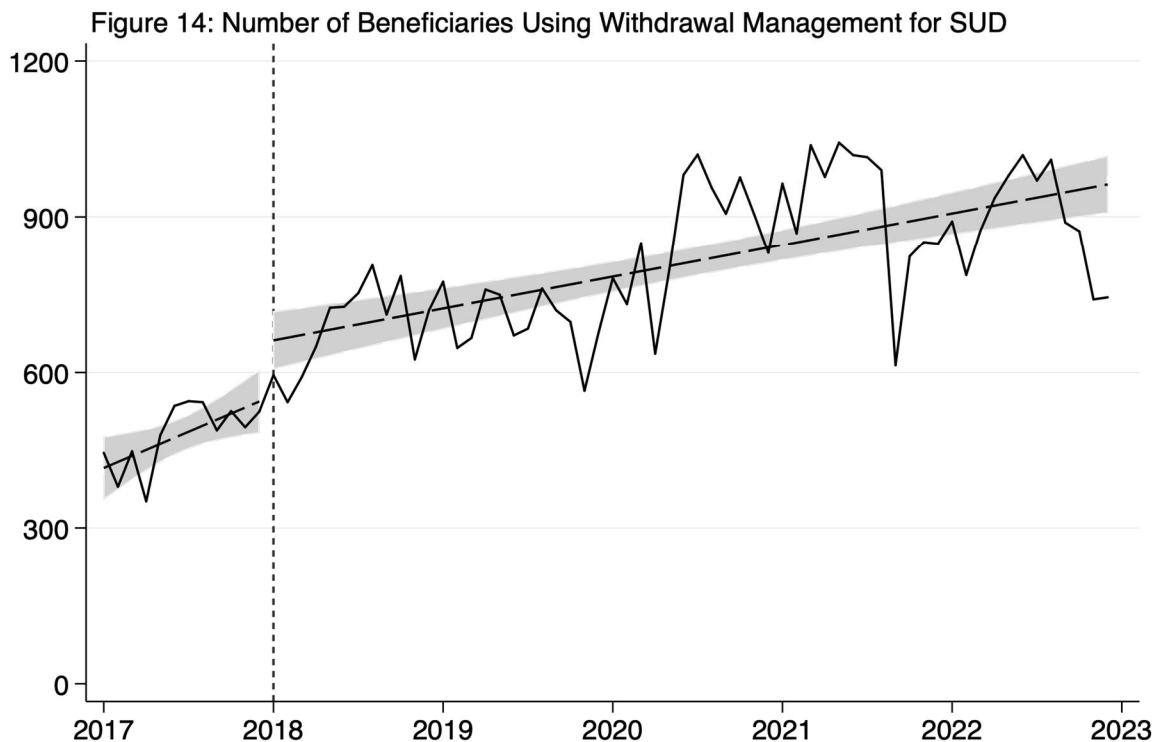
Monitoring Metric: #11, Withdrawal Management

Description: Number of beneficiaries who use withdrawal management services (such as outpatient, inpatient, or residential) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The total number of unduplicated beneficiaries with a service claim for withdrawal management for SUD during the measurement period. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 14: Number of Beneficiaries Using Withdrawal Management for SUD

	b/se/ci95
Pre-Period Slope	11.58*** (2.74)
Level Change	[6.21,16.95] 105.61*** (32.57)
Post-Period Slope	[41.78,169.44] 5.10*** (1.10)
Slope Change	[2.95,7.26] -6.48** (3.12)
	[-12.59,-0.37]
Pre-Period Mean	480.67
Pre-Period Min	353
Pre-Period Max	545
Post-Period Mean	812.07
Post-Period Min	543
Post-Period Max	1043
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 14a – Number of Beneficiaries Using Withdrawal Management for SUD – COVID Adjustment

Evaluation Demonstration Goal 1.1

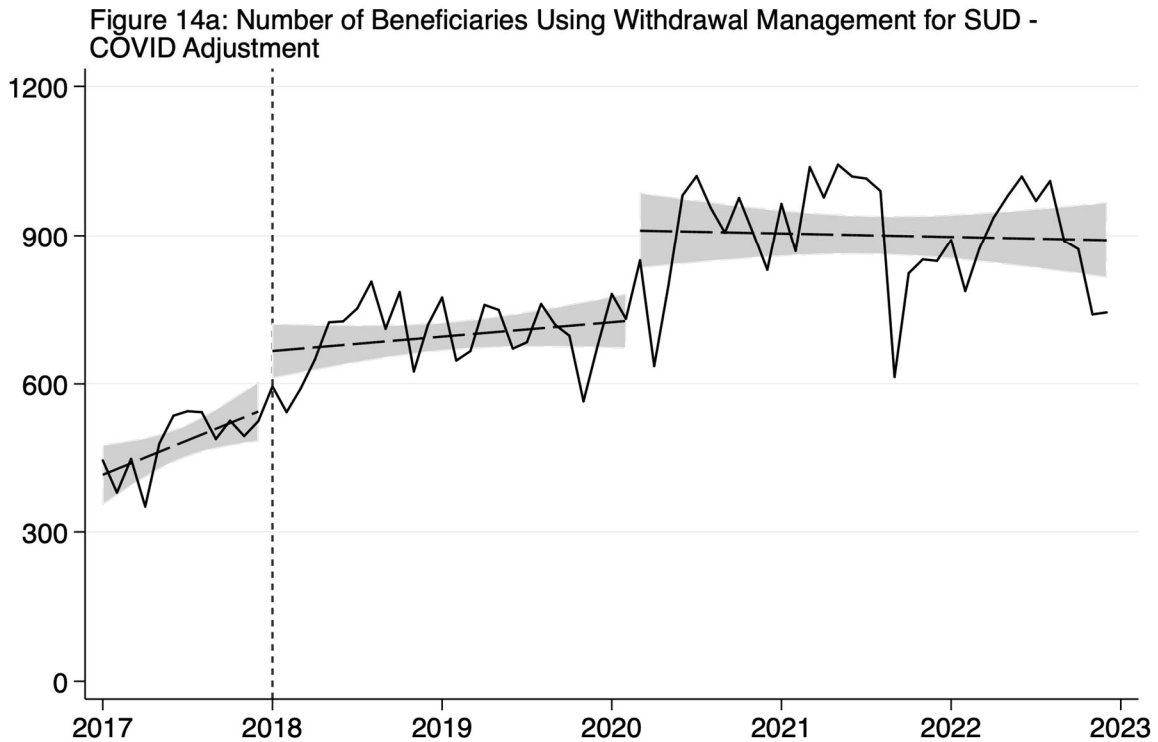
Monitoring Metric: #11, Withdrawal Management

Description: Number of beneficiaries who use withdrawal management services (such as outpatient, inpatient, or residential) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The total number of unduplicated beneficiaries with a service claim for withdrawal management for SUD during the measurement period. Intervention date was assigned to the first quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 14a: Number of Beneficiaries Using Withdrawal Management for SUD - COVID Adjustment

	b/se/ci95
Pre-Period Slope	11.58*** (2.78) [6.13,17.03]
Demonstration Level Change	110.28*** (39.44) [32.99,187.58]
Post-Demonstration Slope	2.42 (2.53) [-2.54,7.37]
Post-Demonstration Slope Change	-9.16** (4.40) [-17.80,-0.53]
COVID Level Change	181.13*** (54.33) [74.64,287.63]
Post-COVID Slope	-0.59 (2.50) [-5.49,4.32]
Post-COVID Slope Change	-3.00 (3.58) [-10.01,4.01]
Pre-Period Mean	480.67
Pre-Period Min	353
Pre-Period Max	545
Post-Period Mean	812.07
Post-Period Min	543
Post-Period Max	1043
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 15 – Percent of SUD Beneficiaries Using Withdrawal Management for SUD

Evaluation Demonstration Goal 1.1

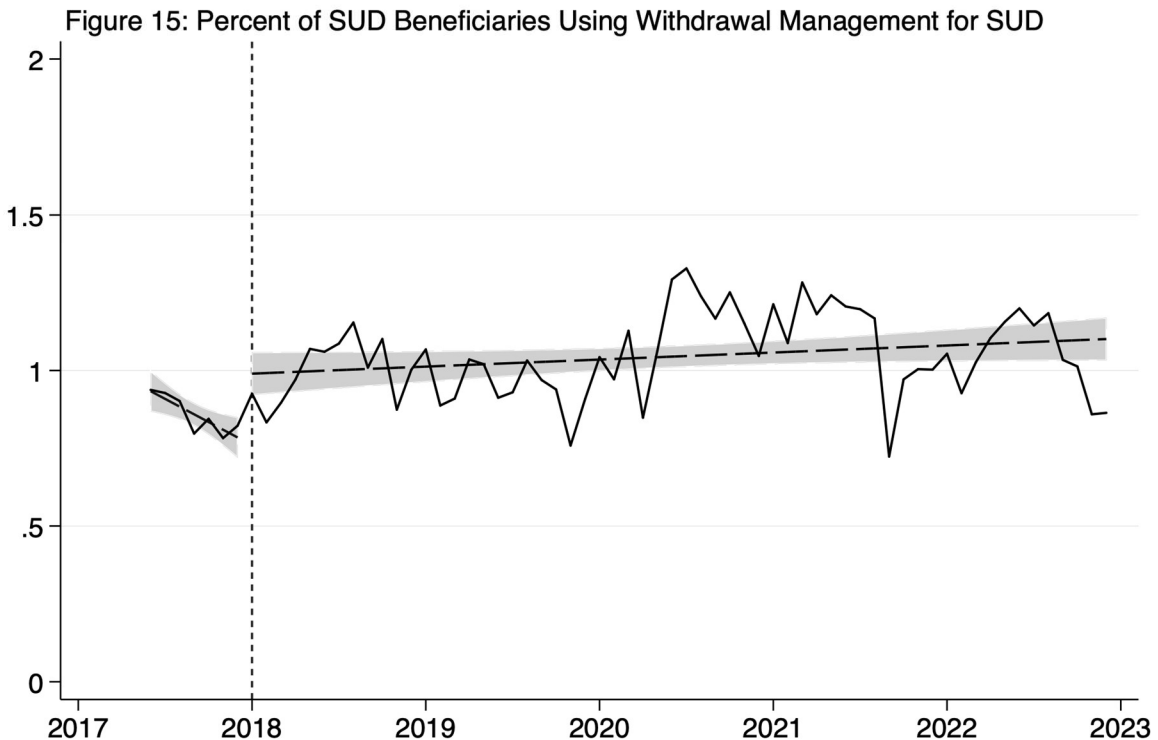
Monitoring Metric: N/A

Description: Percent of beneficiaries who use withdrawal management services (such as outpatient, inpatient, or residential) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for withdrawal management for SUD during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 15: Percent of SUD Beneficiaries Using Withdrawal Management for SUD

	b/se/ci95
Pre-Period Slope	-0.025*** (0.004)
Level Change	[-0.032,-0.018] 0.228*** (0.046)
Post-Period Slope	[0.138,0.319] 0.002 (0.001)
Slope Change	[-0.001,0.004] 0.026*** (0.004)
	[0.020,0.033]
Pre-Period Mean	0.86
Pre-Period Min	0.78
Pre-Period Max	0.94
Post-Period Mean	1.05
Post-Period Min	0.73
Post-Period Max	1
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
p<0.10, **p<0.05, *p<0.01*

Appendix Figure 15a – Percent of SUD Beneficiaries Using Withdrawal Management for SUD – COVID Adjustment

Evaluation Demonstration Goal 1.1

Monitoring Metric: N/A

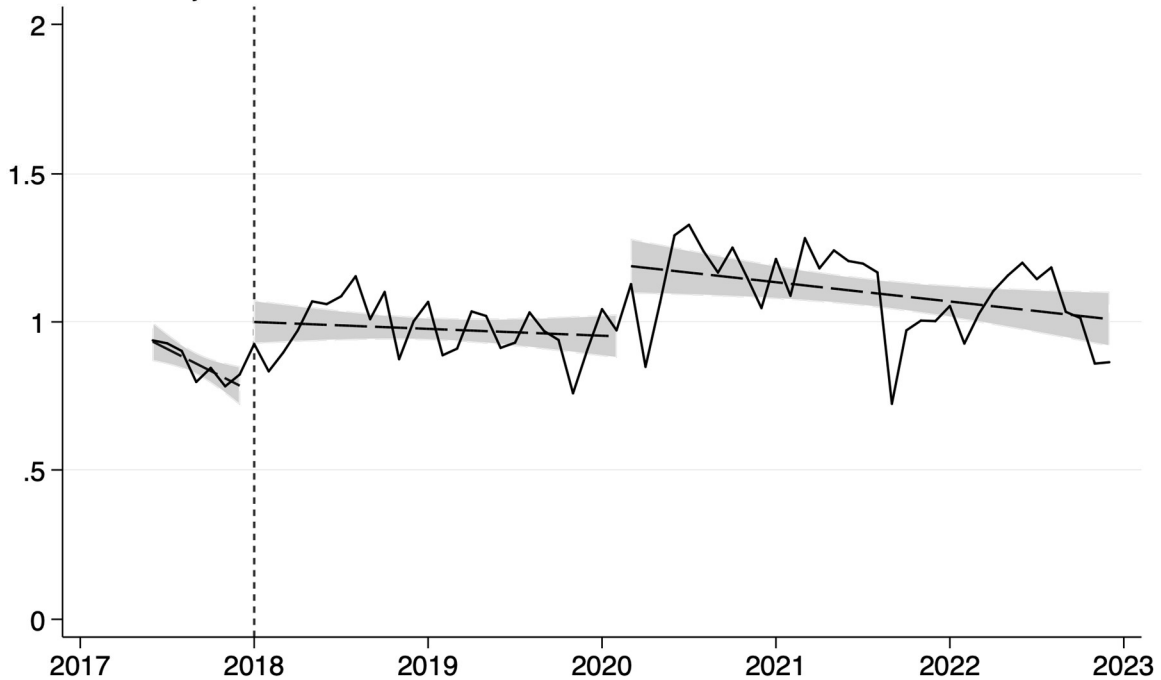
Description: Percent of beneficiaries who use withdrawal management services (such as outpatient, inpatient, or residential) during the measurement period.

Primary Driver: Increase access to evidence-based OUD/SUD care

Secondary Drivers:

- Maintaining the status quo for OUD/SUD treatment in IMDs
 - Status: Ongoing
 - Details: Treating SUD in IMDs was occurring before the SUD Demonstration with “in lieu of services” provided by the MCOs, and has continued through the start date of February 1, 2018 for approval of the SUD 1115 Demonstration waiver. Maintaining the status quo for SUD treatment in IMDs is ongoing as maintaining the status quo is the intention of the 1115 waiver.
- Extended coverage to ASAM Level 1-WM: Ambulatory Withdrawal Management without Extended Onsite Monitoring
 - Status: Not started
 - Details: ASAM 1-WM is not currently a Medicaid covered service and is dependent upon future funding via Louisiana legislative budget approval. However, medication management (via E/M coding) is provided by physicians and other qualified healthcare professionals in the outpatient setting.

Figure 15a: Percent of SUD Beneficiaries Using Withdrawal Management for SUD - COVID Adjustment



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for withdrawal management for SUD during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to the first

quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 15a: Percent of SUD Beneficiaries Using Withdrawal Management for SUD - COVID Adjustment

	b/se/ci95
Pre-Period Slope	-0.025*** (0.004) [-0.032,-0.018]
Demonstration Level Change	0.238*** (0.063) [0.115,0.361]
Post-Demonstration Slope	-0.002 (0.003) [-0.008,0.004]
Post-Demonstration Slope Change	0.023*** (0.004) [0.016,0.030]
COVID Level Change	0.237*** (0.064) [0.113,0.362]
Post-COVID Slope	-0.005* (0.003) [-0.011,0.000]
Post-COVID Slope Change	-0.003 (0.004) [-0.012,0.005]
Pre-Period Mean	0.86
Pre-Period Min	0.78
Pre-Period Max	0.94
Post-Period Mean	1.05
Post-Period Min	0.73
Post-Period Max	1.33
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 16 – Number of Beneficiaries Using MAT for SUD

Evaluation Demonstration Goal 1.2

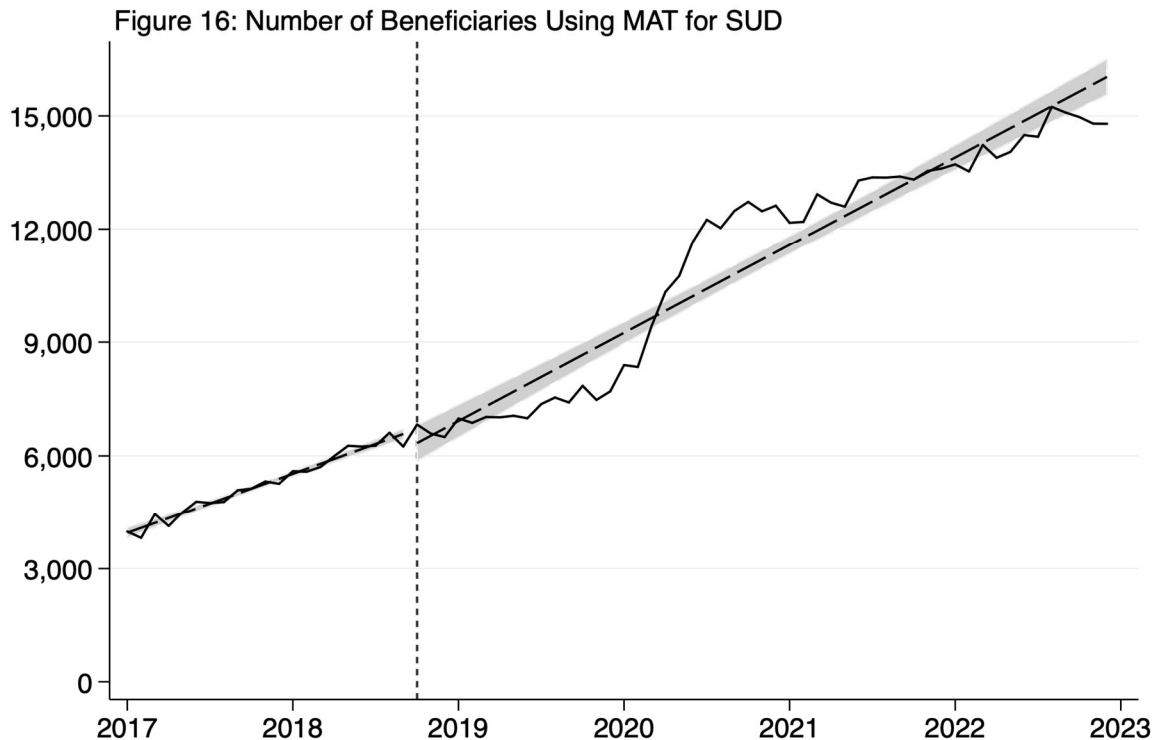
Monitoring Metric: #12, Medication-Assisted Treatment

Description: Number of beneficiaries who have a claim for MAT for SUD during the measurement period

Primary Driver: Increase access to and utilization of medication-assisted treatment (MAT) for SUD

Secondary Drivers:

- Educate abstinence-based residential providers on benefits of MAT.
 - Status: Started 4/01/2019
 - Details: Increasing access to MAT or OUD is occurring with the CMS requirement for SUD residential providers to offer MAT onsite or facilitate access to MAT offsite when clinically indicated for patients in their care.
- Encourage physicians to become certified dispensers.
 - Status: Started 10/01/2018
 - Details: FDA approved AUD MAT medications (Disulfiram, Acamprosate and Naltrexone) do not require licensed prescribers to be certified, as are data-waivered to prescribe Buprenorphine. In Louisiana, MDs, APRNs, and PAs are qualified to become data waivered. Prescribers are being recruited through The LaSOR grant to participate in the “Hub and Spoke model. The LASOR grant timeframe is 10/01/18 to 9/30/2020. LASOR started recruiting in April “officially” when the LSU Contract was completed. As of 9/13/19, 44 new prescribers were prescribing Suboxone. This recruitment will continue through 9/30/2020 with this grant.



Notes: The total number of unduplicated beneficiaries with a service claim for medication-assisted treatment for SUD during the measurement period. Intervention date was assigned to October 2018 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 16: Number of Beneficiaries Using MAT for SUD

	b/se/ci95
Pre-Period Slope	131.39*** (3.90)
Level Change	[123.74,139.04] -371.06 (452.40)
Post-Period Slope	[-1257.75,515.63] 193.86*** (12.50)
Slope Change	[169.37,218.36] 62.47*** (12.96)
	[37.07,87.88]
Pre-Period Mean	5264.05
Pre-Period Min	3814
Pre-Period Max	6611
Post-Period Mean	11184.82
Post-Period Min	6498
Post-Period Max	15238
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
p*<0.10, *p*<0.05, ****p*<0.01

Appendix Figure 16a – Number of Beneficiaries Using MAT for SUD – COVID Adjustment

Evaluation Demonstration Goal 1.2

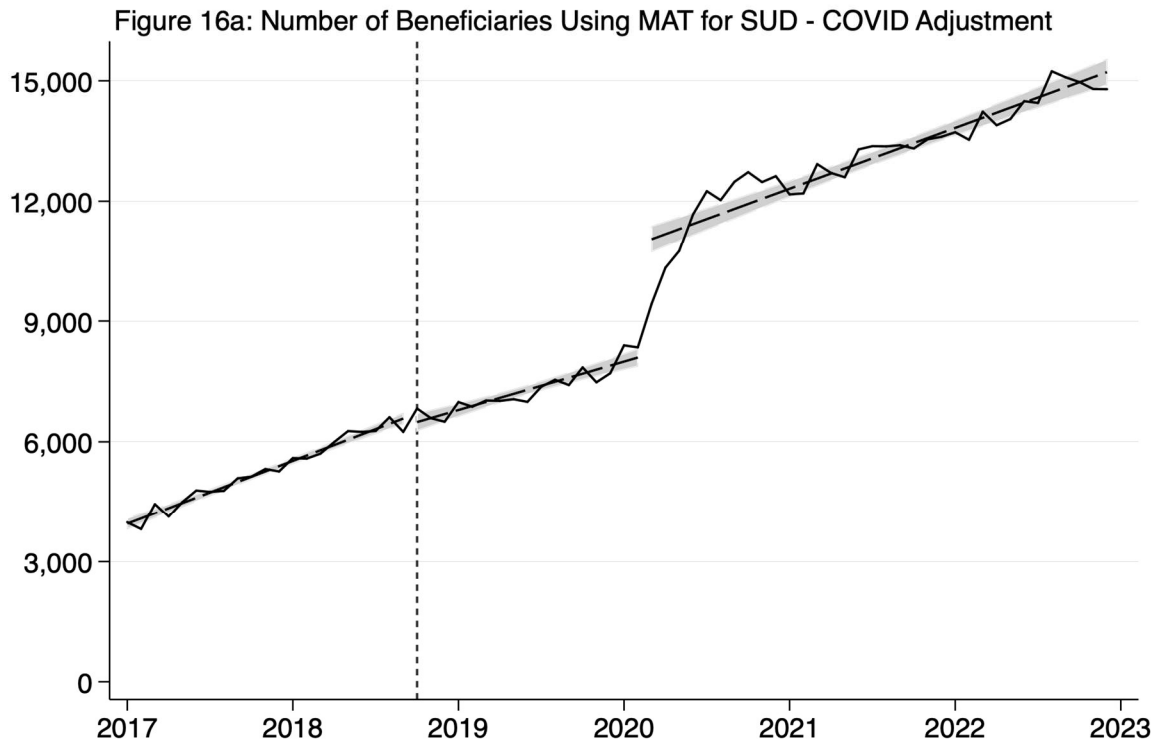
Monitoring Metric: #12, Medication-Assisted Treatment

Description: Number of beneficiaries who have a claim for MAT for SUD during the measurement period

Primary Driver: Increase access to and utilization of medication-assisted treatment (MAT) for SUD

Secondary Drivers:

- Educate abstinence-based residential providers on benefits of MAT.
 - Status: Started 4/01/2019
 - Details: Increasing access to MAT or OUD is occurring with the CMS requirement for SUD residential providers to offer MAT onsite or facilitate access to MAT offsite when clinically indicated for patients in their care.
- Encourage physicians to become certified dispensers.
 - Status: Started 10/01/2018
 - Details: FDA approved AUD MAT medications (Disulfiram, Acamprosate and Naltrexone) do not require licensed prescribers to be certified, as are data-waivered to prescribe Buprenorphine. In Louisiana, MDs, APRNs, and PAs are qualified to become data waivered. Prescribers are being recruited through The LaSOR grant to participate in the “Hub and Spoke model. The LASOR grant timeframe is 10/01/18 to 9/30/2020. LASOR started recruiting in April “officially” when the LSU Contract was completed. As of 9/13/19, 44 new prescribers were prescribing Suboxone. This recruitment will continue through 9/30/2020 with this grant.



Notes: The total number of unduplicated beneficiaries with a service claim for medication-assisted treatment for SUD during the measurement period. Intervention date was assigned to October 2018 to correspond with the implementation of the first secondary driver associated with this outcome. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 16a: Number of Beneficiaries Using MAT for SUD - COVID Adjustment

	b/se/ci95
Pre-Period Slope	131.39*** (3.96) [123.62,139.15]
Demonstration Level Change	-219.87* (119.08) [-453.26,13.53]
Post-Demonstration Slope	100.19*** (10.63) [79.35,121.03]
Post-Demonstration Slope Change	-31.19*** (10.16) [-51.11,-11.28]
COVID Level Change	2854.98*** (427.29) [2017.50,3692.46]
Post-COVID Slope	126.30*** (15.24) [96.43,156.17]
Post-COVID Slope Change	26.11** (13.24) [0.16,52.06]
Pre-Period Mean	5264.05
Pre-Period Min	3814
Pre-Period Max	6611
Post-Period Mean	11184.82
Post-Period Min	6498
Post-Period Max	15238
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 17 – Percent of SUD Beneficiaries Using MAT for SUD

Evaluation Demonstration Goal 1.2

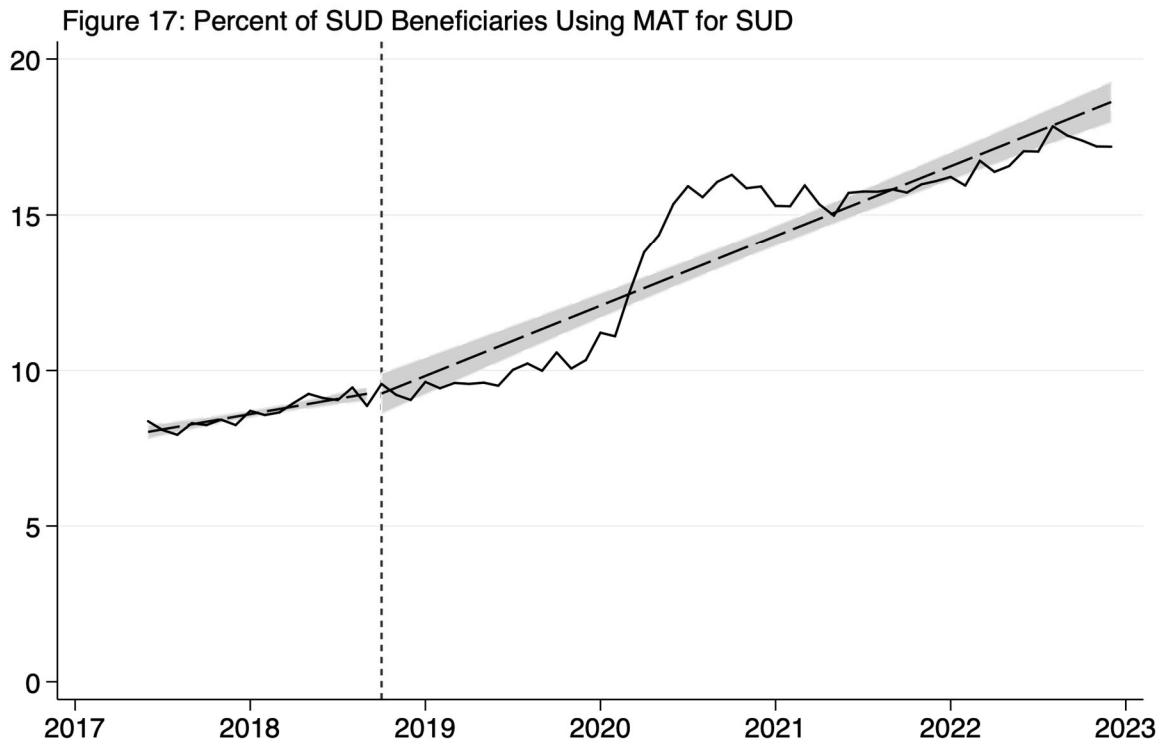
Monitoring Metric: N/A

Description: Percent of beneficiaries who have a claim for MAT for SUD during the measurement period

Primary Driver: Increase access to and utilization of medication-assisted treatment (MAT) for SUD

Secondary Drivers:

- Educate abstinence-based residential providers on benefits of MAT.
 - Status: Started 4/01/2019
 - Details: Increasing access to MAT or OUD is occurring with the CMS requirement for SUD residential providers to offer MAT onsite or facilitate access to MAT offsite when clinically indicated for patients in their care.
- Encourage physicians to become certified dispensers.
 - Status: Started 10/01/2018
 - Details: FDA approved AUD MAT medications (Disulfiram, Acamprosate and Naltrexone) do not require licensed prescribers to be certified, as are data-waivered to prescribe Buprenorphine. In Louisiana, MDs, APRNs, and PAs are qualified to become data waivered. Prescribers are being recruited through The LaSOR grant to participate in the “Hub and Spoke model. The LASOR grant timeframe is 10/01/18 to 9/30/2020. LASOR started recruiting in April “officially” when the LSU Contract was completed. As of 9/13/19, 44 new prescribers were prescribing Suboxone. This recruitment will continue through 9/30/2020 with this grant.



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for medication-assisted treatment for SUD during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to October 2018 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 17: Percent of SUD Beneficiaries Using MAT for SUD

	b/se/ci95
Pre-Period Slope	0.081*** (0.009)
Level Change	[0.063,0.099] -0.072 (0.626)
Post-Period Slope	[-1.299,1.154] 0.187*** (0.016)
Slope Change	[0.155,0.219] 0.106*** (0.019)
	[0.069,0.143]
Pre-Period Mean	8.65
Pre-Period Min	7.95
Pre-Period Max	9.46
Post-Period Mean	13.94
Post-Period Min	9.06
Post-Period Max	18
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 17a – Percent of SUD Beneficiaries Using MAT for SUD – COVID Adjustment

Evaluation Demonstration Goal 1.2

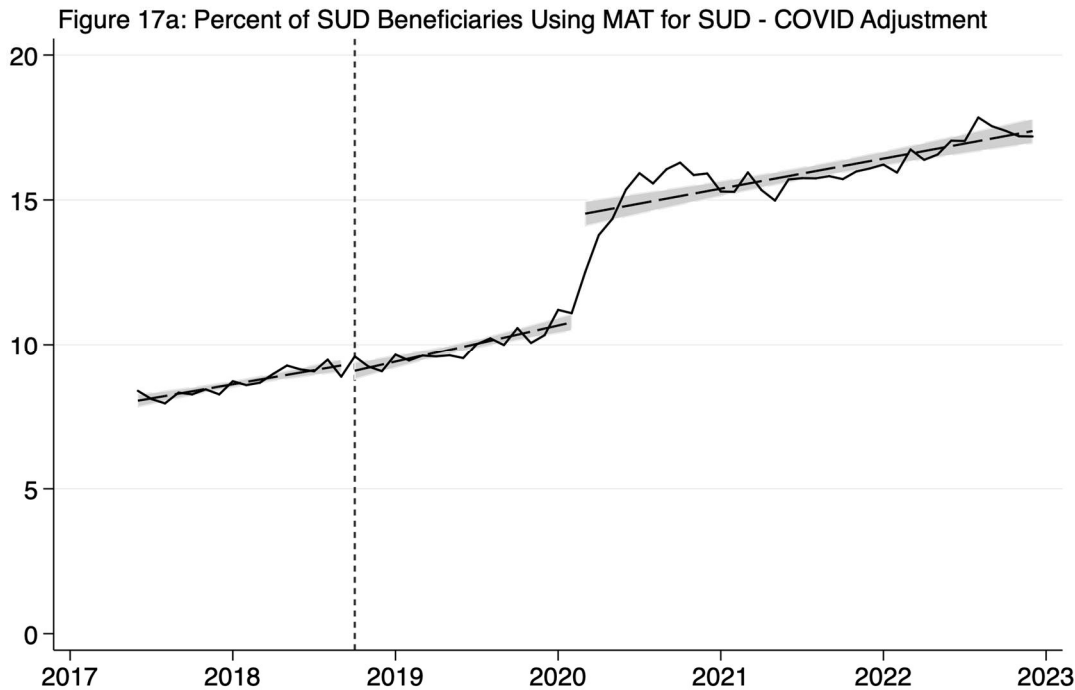
Monitoring Metric: N/A

Description: Percent of beneficiaries who have a claim for MAT for SUD during the measurement period

Primary Driver: Increase access to and utilization of medication-assisted treatment (MAT) for SUD

Secondary Drivers:

- Educate abstinence-based residential providers on benefits of MAT.
 - Status: Started 4/01/2019
 - Details: Increasing access to MAT or OUD is occurring with the CMS requirement for SUD residential providers to offer MAT onsite or facilitate access to MAT offsite when clinically indicated for patients in their care.
- Encourage physicians to become certified dispensers.
 - Status: Started 10/01/2018
 - Details: FDA approved AUD MAT medications (Disulfiram, Acamprosate and Naltrexone) do not require licensed prescribers to be certified, as are data-waivered to prescribe Buprenorphine. In Louisiana, MDs, APRNs, and PAs are qualified to become data waivered. Prescribers are being recruited through The LaSOR grant to participate in the “Hub and Spoke model. The LASOR grant timeframe is 10/01/18 to 9/30/2020. LASOR started recruiting in April “officially” when the LSU Contract was completed. As of 9/13/19, 44 new prescribers were prescribing Suboxone. This recruitment will continue through 9/30/2020 with this grant.



Notes: The numerator is the total number of unduplicated beneficiaries with a service claim for medication-assisted treatment for SUD during the measurement period. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis. Intervention date was assigned to October 2018 to correspond with the implementation of the first secondary driver associated with this outcome. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 17a: Percent of SUD Beneficiaries Using MAT for SUD - COVID Adjustment

	b/se/ci95
Pre-Period Slope	0.081*** (0.009) [0.063,0.100]
Demonstration Level Change	-0.262 (0.180) [-0.614,0.090]
Post-Demonstration Slope	0.106*** (0.015) [0.077,0.136]
Post-Demonstration Slope Change	0.025 (0.016) [-0.007,0.057]
COVID Level Change	3.648*** (0.544) [2.581,4.714]
Post-COVID Slope	0.086*** (0.019) [0.048,0.124]
Post-COVID Slope Change	-0.020 (0.019) [-0.057,0.018]
Pre-Period Mean	8.65
Pre-Period Min	7.95
Pre-Period Max	9.46
Post-Period Mean	13.94
Post-Period Min	9.06
Post-Period Max	17.85
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 18 – Number of MAT Providers

Evaluation Demonstration Goal 1.2

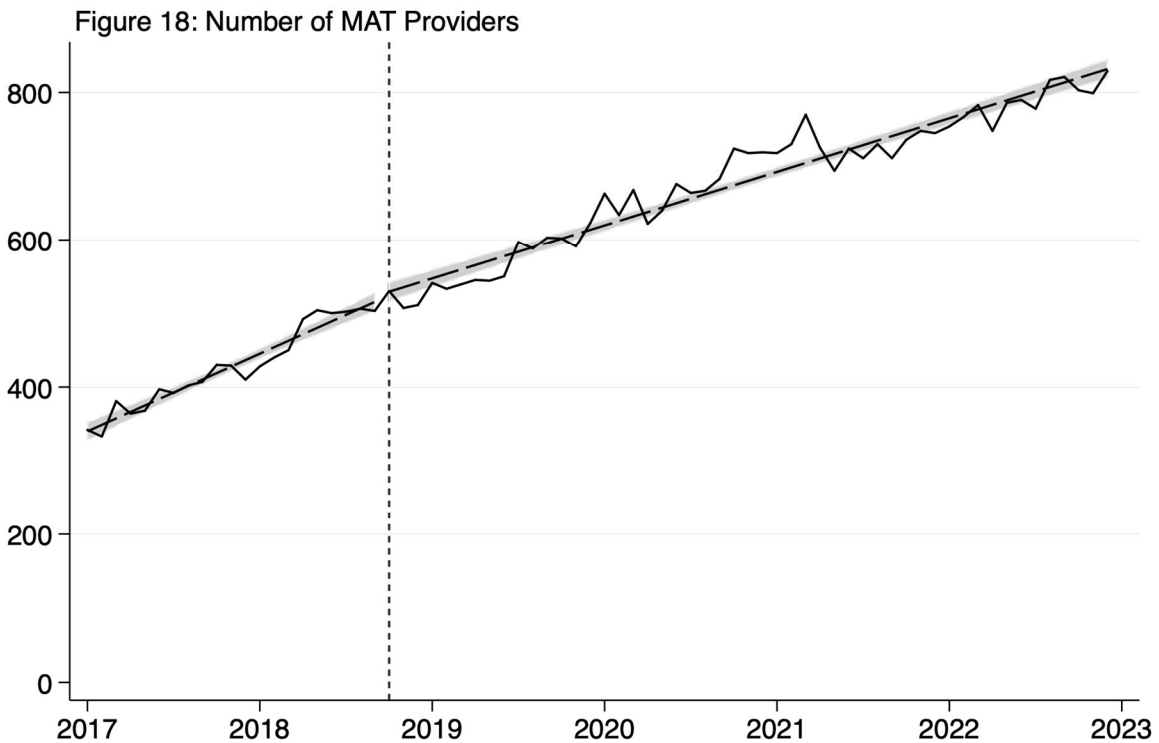
Monitoring Metric: #14, SUD Provider Availability, Medication-Assisted Treatment

Description: The number of providers who were enrolled in Medicaid and qualified to deliver SUD services during the measurement period and who meet the standards to provide buprenorphine or methadone as part of MAT.

Primary Driver: Increase access to and utilization of medication-assisted treatment (MAT) for SUD

Secondary Drivers:

- Educate abstinence-based residential providers on benefits of MAT.
 - Status: Started 4/01/2019
 - Details: Increasing access to MAT or OUD is occurring with the CMS requirement for SUD residential providers to offer MAT onsite or facilitate access to MAT offsite when clinically indicated for patients in their care.
- Encourage physicians to become certified dispensers.
 - Status: Started 10/01/2018
 - Details: FDA approved AUD MAT medications (Disulfiram, Acamprosate and Naltrexone) do not require licensed prescribers to be certified, as are data-waivered to prescribe Buprenorphine. In Louisiana, MDs, APRNs, and PAs are qualified to become data waivered. Prescribers are being recruited through The LaSOR grant to participate in the “Hub and Spoke model. The LASOR grant timeframe is 10/01/18 to 9/30/2020. LASOR started recruiting in April “officially” when the LSU Contract was completed. As of 9/13/19, 44 new prescribers were prescribing Suboxone. This recruitment will continue through 9/30/2020 with this grant.



Notes: The total number of eligible SUD providers who meet the standards to provide buprenorphine or methadone as part of MAT. Intervention date was assigned to October 2018 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 18: Number of MAT Providers

	b/se/ci95
Pre-Period Slope	8.76*** (0.36) [8.05,9.47]
Level Change	5.05 (11.18) [-16.87,26.97]
Post-Period Slope	6.05*** (0.29) [5.48,6.63]
Slope Change	-2.71*** (0.49) [-3.67,-1.75]
Pre-Period Mean	427.62
Pre-Period Min	333
Pre-Period Max	506
Post-Period Mean	680.37
Post-Period Min	507
Post-Period Max	829
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 19 – Number of MAT Providers per 1,000 Beneficiaries with an SUD

Evaluation Demonstration Goal 1.2

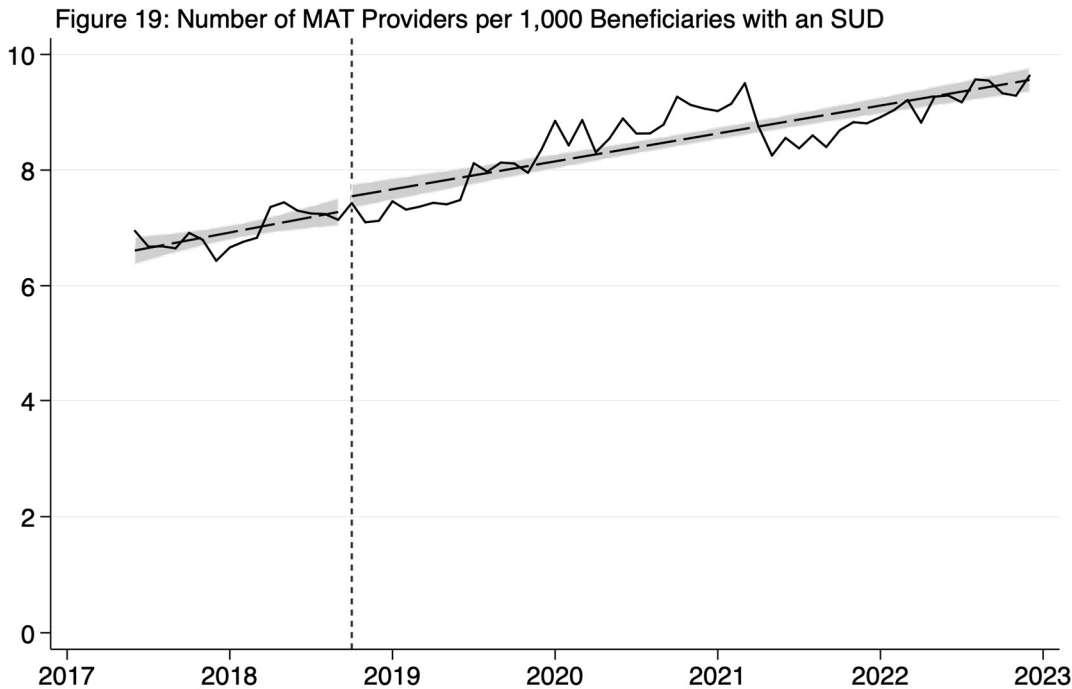
Monitoring Metric: N/A

Description: The number of providers who were enrolled in Medicaid and qualified to deliver SUD services during the measurement period and who meet the standards to provide buprenorphine or methadone as part of MAT per 1,000 Medicaid Beneficiaries with an SUD Diagnosis.

Primary Driver: Increase access to and utilization of medication-assisted treatment (MAT) for SUD

Secondary Drivers:

- Educate abstinence-based residential providers on benefits of MAT.
 - Status: Started 4/01/2019
 - Details: Increasing access to MAT or OUD is occurring with the CMS requirement for SUD residential providers to offer MAT onsite or facilitate access to MAT offsite when clinically indicated for patients in their care.
- Encourage physicians to become certified dispensers.
 - Status: Started 10/01/2018
 - Details: FDA approved AUD MAT medications (Disulfiram, Acamprosate and Naltrexone) do not require licensed prescribers to be certified, as are data-waivered to prescribe Buprenorphine. In Louisiana, MDs, APRNs, and PAs are qualified to become data waived. Prescribers are being recruited through The LaSOR grant to participate in the “Hub and Spoke” model. The LASOR grant timeframe is 10/01/18 to 9/30/2020. LASOR started recruiting in April “officially” when the LSU Contract was completed. As of 9/13/19, 44 new prescribers were prescribing Suboxone. This recruitment will continue through 9/30/2020 with this grant.



Notes: The numerator is the total number of eligible SUD providers who meet the standards to provide buprenorphine or methadone as part of MAT. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis (in thousands). Intervention date was assigned to October 2018 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 19: Number of MAT Providers per 1,000 Beneficiaries with an SUD

	b/se/ci95
Pre-Period Slope	0.044*** (0.011) [0.023,0.066]
Level Change	0.228 (0.212) [-0.188,0.644]
Post-Period Slope	0.040*** (0.005) [0.030,0.051]
Slope Change	-0.004 (0.012) [-0.028,0.020]
Pre-Period Mean	6.94
Pre-Period Min	6.43
Pre-Period Max	7.44
Post-Period Mean	8.55
Post-Period Min	7.10
Post-Period Max	10
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 20 – Number of SUD Providers

Evaluation Demonstration Goal 1.3

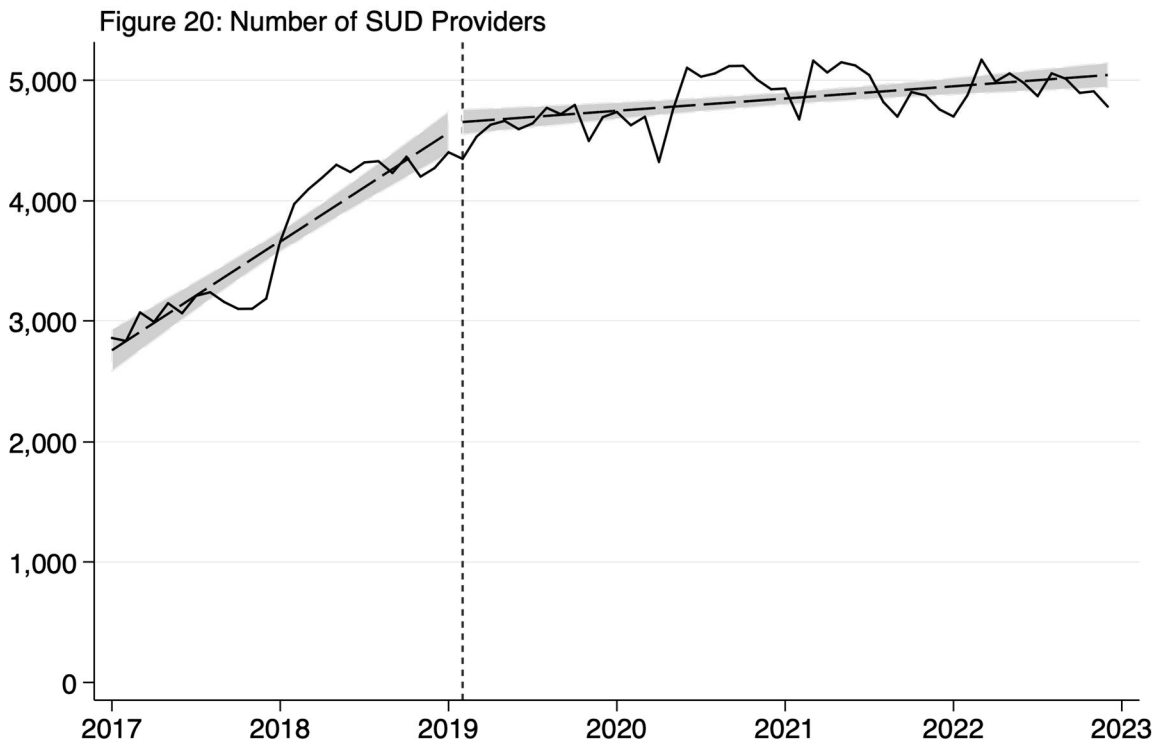
Monitoring Metric: #13, SUD Provider Availability

Description: The number of providers who were enrolled in Medicaid and qualified to deliver SUD services during the measurement period.

Primary Driver: Ensure sufficient provider capacity at each level of care for SUD

Secondary Drivers:

- Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT.
 - Status: Started 1/30/2019
 - Details: The MCOs were required to resubmit their 2019 Network Development and Management Plan to include information on MAT providers. The Network Development and Management Plans are due on January 30th each year. The reporting template for the 2020 submission will be revised emphasizing that the MCOs are to “specifically focus on SUD provider capacity,” in addition to the MAT access that we previously requested.



Notes: Total number of eligible SUD providers. Intervention date was assigned to February 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 20: Number of SUD Providers

	b/se/ci95
Pre-Period Slope	75.31*** (6.77) [62.04,88.58]
Level Change	13.32 (131.62) [-244.66,271.30]
Post-Period Slope	8.46*** (2.25) [4.05,12.87]
Slope Change	-66.85*** (7.66) [-81.87,-51.83]
Pre-Period Mean	3661.32
Pre-Period Min	2834
Pre-Period Max	4403
Post-Period Mean	4848.21
Post-Period Min	4323
Post-Period Max	5170
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 21 – Number of SUD Providers per 1,000 Beneficiaries with an SUD

Evaluation Demonstration Goal 1.3

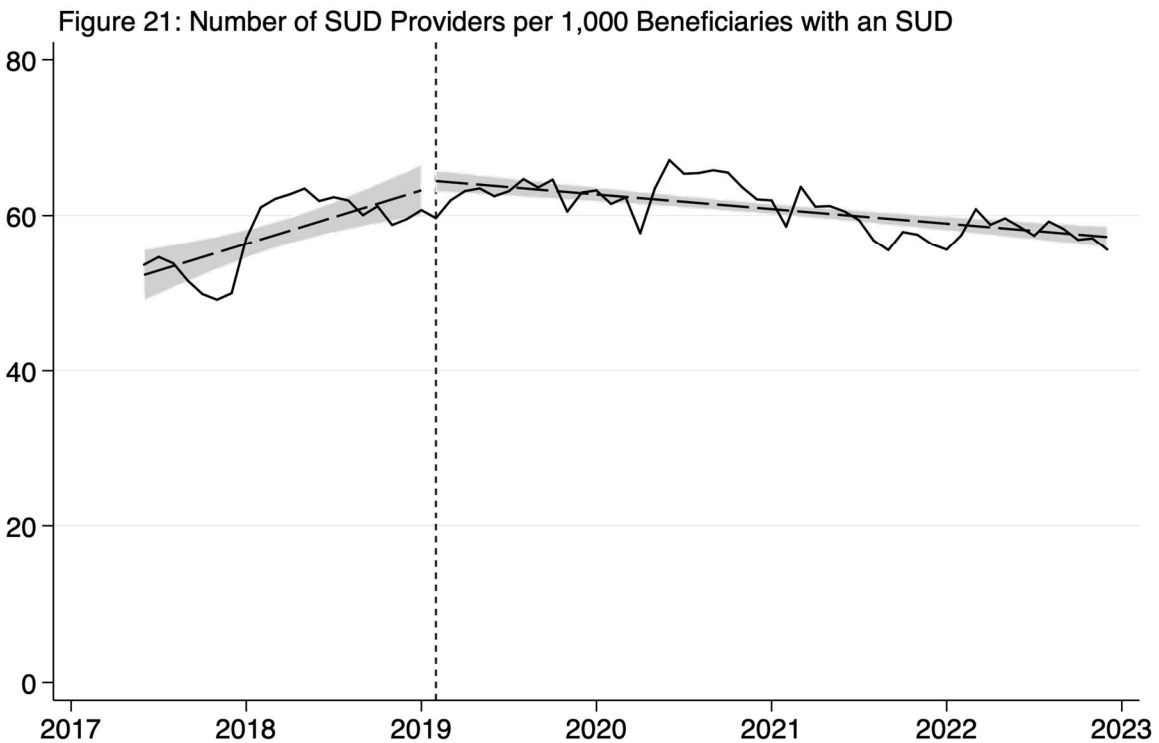
Monitoring Metric: N/A

Description: The number of providers who were enrolled in Medicaid and qualified to deliver SUD services during the measurement period per 1,000 Medicaid Beneficiaries with an SUD Diagnosis.

Primary Driver: Ensure sufficient provider capacity at each level of care for SUD

Secondary Drivers:

- Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT.
 - Status: Started 1/30/2019
 - Details: The MCOs were required to resubmit their 2019 Network Development and Management Plan to include information on MAT providers. The Network Development and Management Plans are due on January 30th each year. The reporting template for the 2020 submission will be revised emphasizing that the MCOs are to “specifically focus on SUD provider capacity,” in addition to the MAT access that we previously requested.



Notes: The numerator is the total number of eligible SUD providers. The denominator is the number of unduplicated Medicaid beneficiaries enrolled in a reporting month/year with a paid/accepted claim for date of service in reporting month/year that uses an SUD diagnosis code as the primary diagnosis (in thousands). Intervention date was assigned to February 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 21: Number of SUD Providers per 1,000 Beneficiaries with an SUD

	b/se/ci95
Pre-Period Slope	0.577*** (0.156) [0.271,0.882]
Level Change	0.620 (1.981) [-3.262,4.502]
Post-Period Slope	-0.157*** (0.030) [-0.216,-0.098]
Slope Change	-0.734*** (0.168) [-1.063,-0.404]
Pre-Period Mean	57.77
Pre-Period Min	49.09
Pre-Period Max	63.47
Post-Period Mean	60.84
Post-Period Min	55.49
Post-Period Max	67
Observations	67

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 22 – Emergency Department Visits for SUD per 1,000 Beneficiaries

Evaluation Demonstration Goal 2.1

Monitoring Metric: #23, Emergency Department Visits for SUD

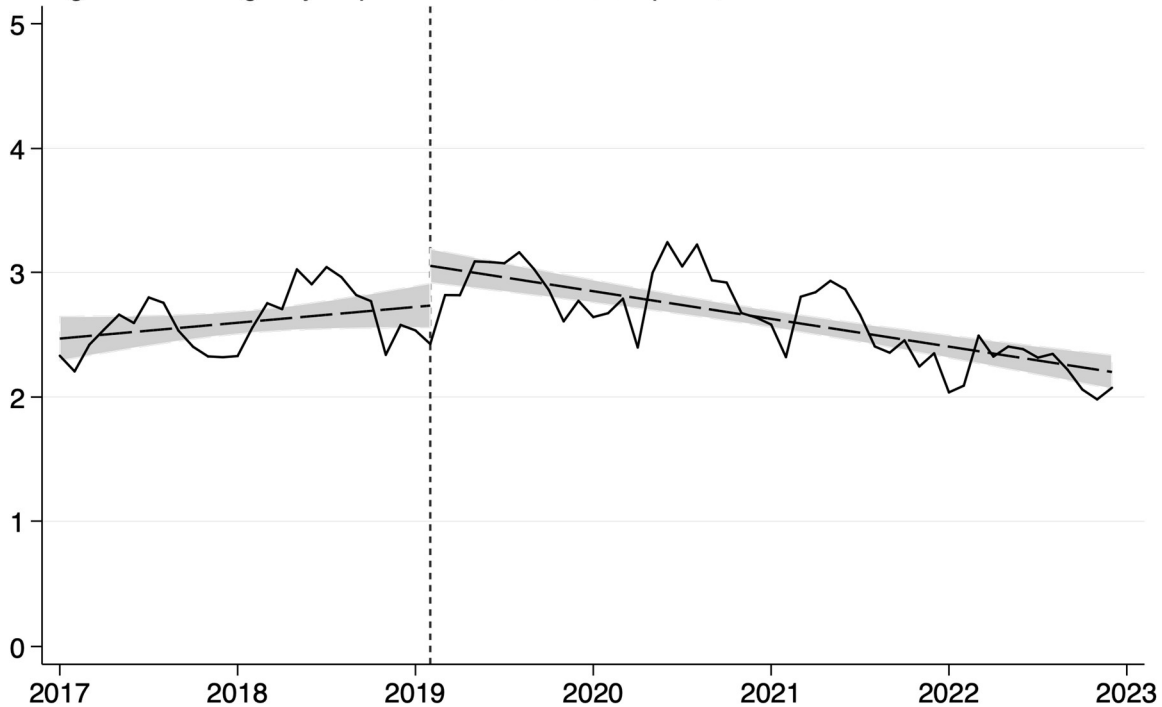
Description: The number of ED visits for SUD per 1,000 beneficiaries in the measurement period.

Primary Driver: Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for SUD treatment.

Secondary Drivers:

- Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT.
 - Status: Started 1/30/2019
 - Details: The MCOs were required to resubmit their 2019 Network Development and Management Plan to include information on MAT providers. The Network Development and Management Plans are due on January 30th each year. The reporting template for the 2020 submission will be revised emphasizing that the MCOs are to “specifically focus on SUD provider capacity,” in addition to the MAT access that we previously requested.

Figure 22: Emergency Department Visits for SUD per 1,000 Beneficiaries



Notes: The numerator is the total number of emergency department visits for SUD during the measurement period. The denominator is the total number of unduplicated Medicaid beneficiaries (in thousands). Intervention date was assigned to February 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 22: Emergency Department Visits for SUD per 1,000 Beneficiaries

	b/se/ci95
Pre-Period Slope	0.014* (0.008)
Level Change	[-0.002,0.030] 0.266* (0.143)
Post-Period Slope	[-0.015,0.547] -0.018*** (0.003)
Slope Change	[-0.025,-0.012] -0.032*** (0.010)
	[-0.051,-0.013]
Pre-Period Mean	2.61
Pre-Period Min	2.21
Pre-Period Max	3.04
Post-Period Mean	2.63
Post-Period Min	1.98
Post-Period Max	3.24
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

Appendix Figure 23 – Inpatient Stays for SUD per 1,000 Beneficiaries

Evaluation Demonstration Goal 2.1

Monitoring Metric: #24, Inpatient Stays for SUD

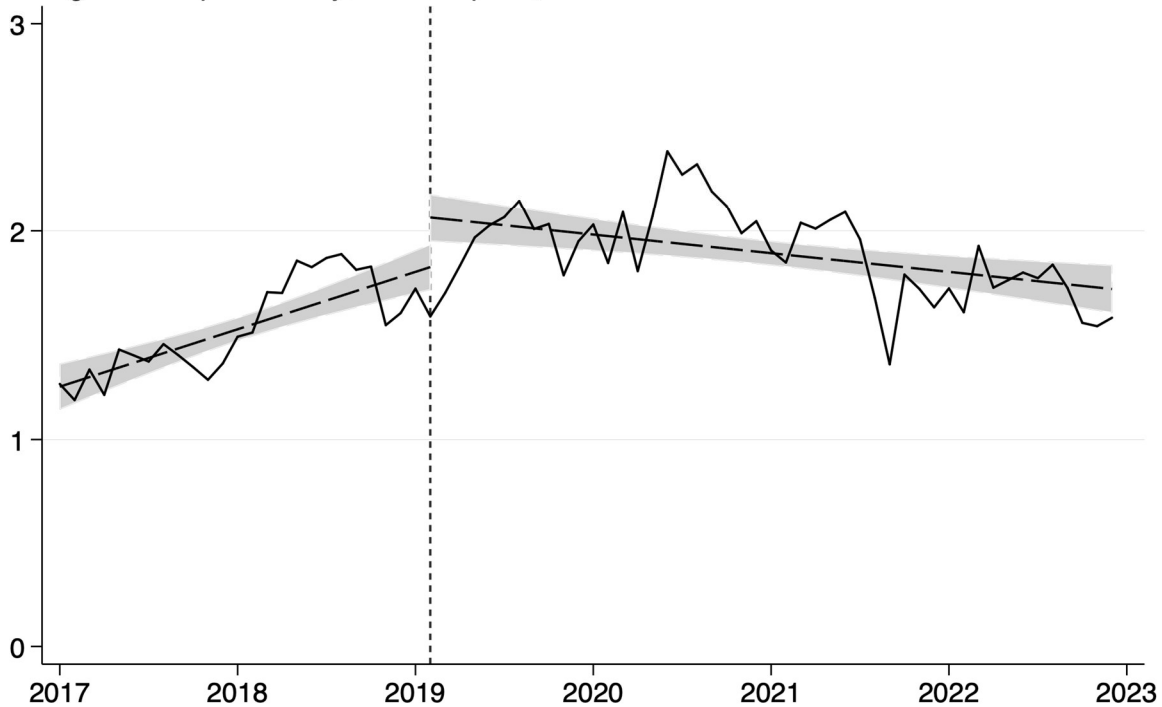
Description: The number of inpatient stays for SUD per 1,000 beneficiaries in the measurement period.

Primary Driver: Decrease use of medically inappropriate care and reduce reliance on emergency department and hospital services for SUD treatment.

Secondary Drivers:

- Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT.
 - Status: Started 1/30/2019
 - Details: The MCOs were required to resubmit their 2019 Network Development and Management Plan to include information on MAT providers. The Network Development and Management Plans are due on January 30th each year. The reporting template for the 2020 submission will be revised emphasizing that the MCOs are to “specifically focus on SUD provider capacity,” in addition to the MAT access that we previously requested.

Figure 23: Inpatient Stays for SUD per 1,000 Beneficiaries



Notes: The numerator is the total number of inpatient stays for SUD during the measurement period. The denominator is the total number of unduplicated Medicaid beneficiaries (in thousands). Intervention date was assigned to February 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 23: Inpatient Stays for SUD per 1,000 Beneficiaries

	b/se/ci95
Pre-Period Slope	0.025*** (0.005)
Level Change	[0.016,0.035] 0.198* (0.110)
Post-Period Slope	[-0.018,0.414] -0.007** (0.003)
Slope Change	[-0.014,-0.001] -0.033*** (0.007)
	[-0.046,-0.019]
Pre-Period Mean	1.54
Pre-Period Min	1.19
Pre-Period Max	1.89
Post-Period Mean	1.89
Post-Period Min	1.36
Post-Period Max	2.39
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 24 – Readmissions among Beneficiaries with SUD

Evaluation Demonstration Goal 2.2

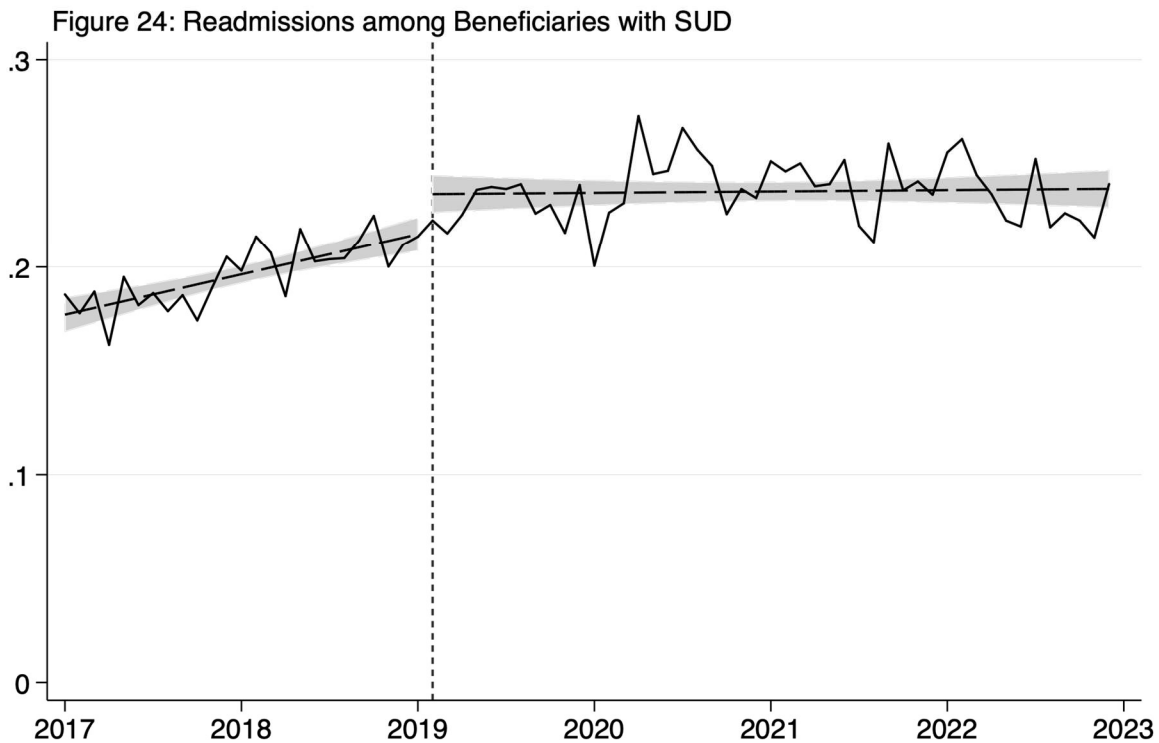
Monitoring Metric: #25, Readmissions among Beneficiaries with SUD

Description: The rate of all-cause readmissions during the measurement period among beneficiaries with SUD.

Primary Driver: Reduce readmission rates for SUD treatment.

Secondary Drivers:

- Require MCOs to update their Specialized Behavioral Health network development and management plan to specifically focus on SUD provider capacity, including MAT.
 - Status: Started 1/30/2019
 - Details: The MCOs were required to resubmit their 2019 Network Development and Management Plan to include information on MAT providers. The Network Development and Management Plans are due on January 30th each year. The reporting template for the 2020 submission will be revised emphasizing that the MCOs are to “specifically focus on SUD provider capacity,” in addition to the MAT access that we previously requested.



Notes: The numerator is the total number of 30-day readmissions (at least one acute readmission for any diagnosis within 30 days of the index discharge date). The denominator is the total number of index hospital stays. Intervention date was assigned to February 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 24: Readmissions among Beneficiaries with SUD

	b/se/ci95
Pre-Period Slope	0.0016*** (0.0002)
Level Change	[0.0013,0.0019] 0.0178*** (0.0059)
Post-Period Slope	[0.0062,0.0294] 0.0001 (0.0002)
Slope Change	[-0.0004,0.0005] -0.0016*** (0.0003)
	[-0.0021,-0.0010]
Pre-Period Mean	0.196
Pre-Period Min	0.162
Pre-Period Max	0.225
Post-Period Mean	0.237
Post-Period Min	0.201
Post-Period Max	0.273
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 25 – Percentage of ED Visits for AOD with Follow-up within 7 Days

Evaluation Demonstration Goal 3.1

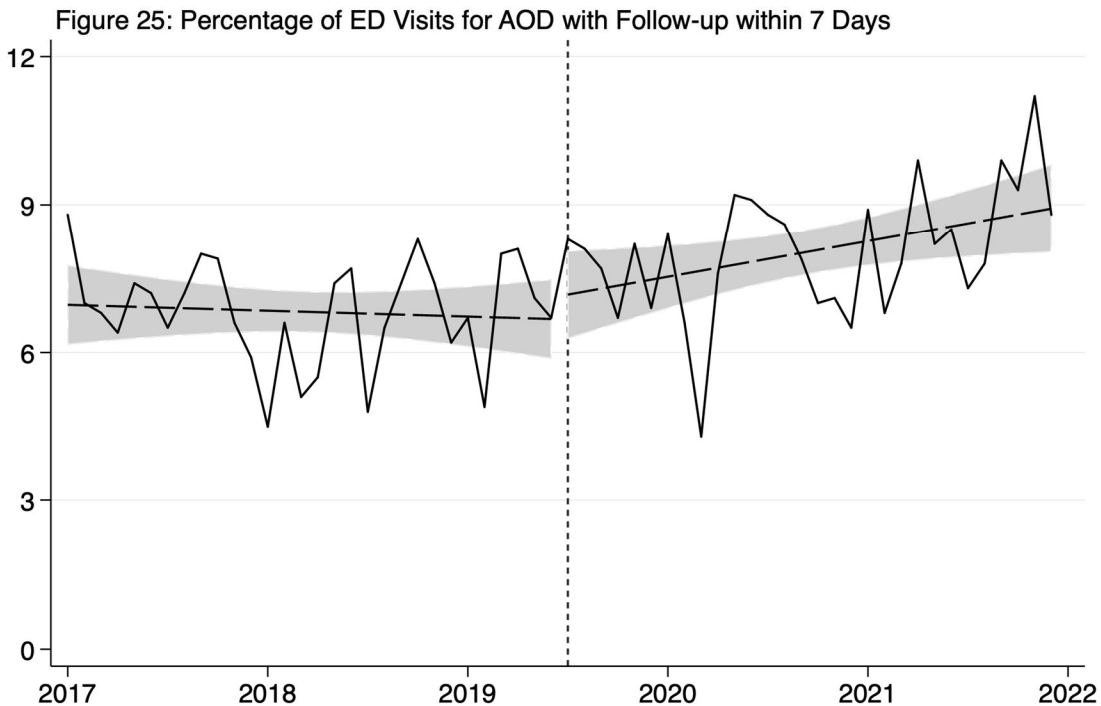
Monitoring Metric: #17(1), Follow-up After ED Visit for Alcohol and Other Drug Abuse or Dependence

Description: Percentage of ED visits for beneficiaries age 18 and older with a principal diagnosis of AOD abuse or dependence who had a follow-up visit for AOD abuse or dependence within 7 days of the ED visit.

Primary Driver: Increase initiation of follow-up after discharge from the emergency department or hospital for SUD.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number of follow-up visits with any practitioner, with a principal diagnosis of AOD abuse or dependence within 7 days after the ED visit (8 total days), including visits that occur on the date of the ED visit. The denominator is the total number of index ED visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 25: Percentage of ED Visits for AOD with Follow-up within 7 Days

	b/se/ci95
Pre-Period Slope	-0.010 (0.017)
Level Change	[-0.044,0.024] 0.503 (0.431)
Post-Period Slope	[-0.341,1.347] 0.060** (0.024)
Slope Change	[0.013,0.108] 0.070** (0.032)
	[0.007,0.134]
Pre-Period Mean	6.82
Pre-Period Min	4.50
Pre-Period Max	8.80
Post-Period Mean	8.05
Post-Period Min	4.30
Post-Period Max	11.20
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
p*<0.10, *p*<0.05, ****p*<0.01

Appendix Figure 26 – Percentage of ED Visits for AOD with Follow-up within 30 Days

Evaluation Demonstration Goal 3.1

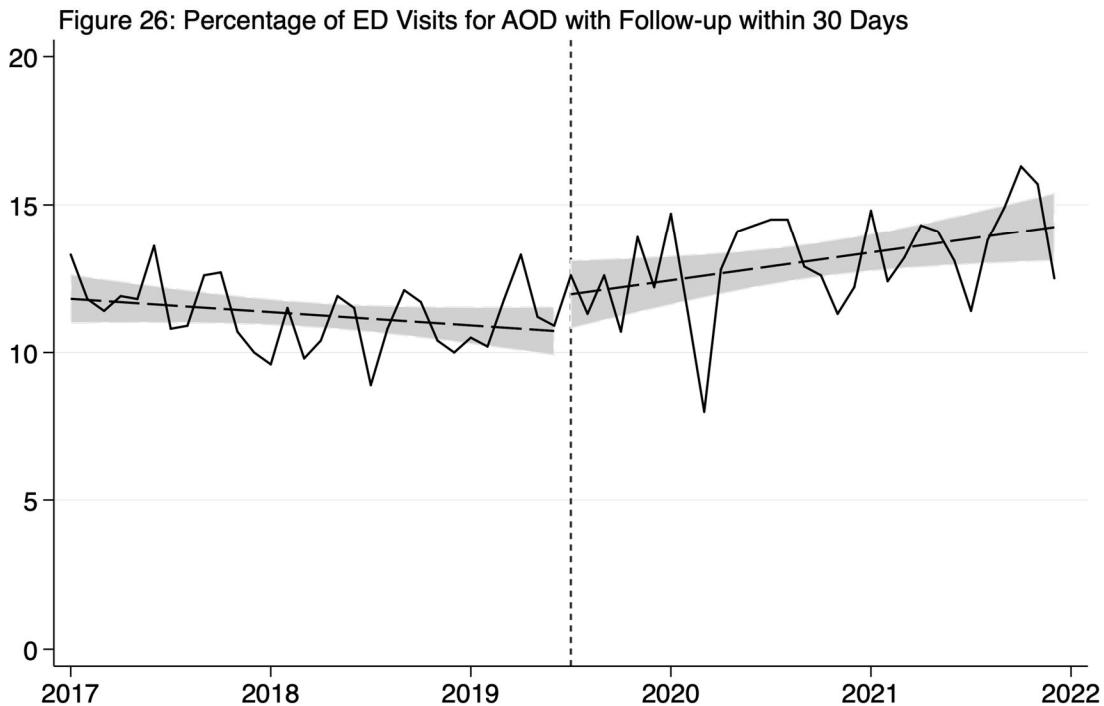
Monitoring Metric: #17(1), Follow-up After ED Visit for Alcohol and Other Drug Abuse or Dependence

Description: Percentage of ED visits for beneficiaries age 18 and older with a principal diagnosis of AOD abuse or dependence who had a follow-up visit for AOD abuse or dependence within 30 days of the ED visit.

Primary Driver: Increase initiation of follow-up after discharge from the emergency department or hospital for SUD.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number of follow-up visits with any practitioner, with a principal diagnosis of AOD abuse or dependence within 30 days after the ED visit (31 total days), including visits that occur on the date of the ED visit. The denominator is the total number of index ED visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 26: Percentage of ED Visits for AOD with Follow-up within 30 Days

	b/se/ci95
Pre-Period Slope	-0.037 (0.023)
Level Change	[-0.083,0.008] 1.274** (0.510)
Post-Period Slope	[0.274,2.273] 0.079*** (0.018)
Slope Change	[0.044,0.114] 0.116*** (0.030)
	[0.058,0.174]
Pre-Period Mean	11.27
Pre-Period Min	8.90
Pre-Period Max	13.60
Post-Period Mean	13.10
Post-Period Min	8.00
Post-Period Max	16.30
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 27 – Percentage Initiating Alcohol Treatment

Evaluation Demonstration Goal 3.2

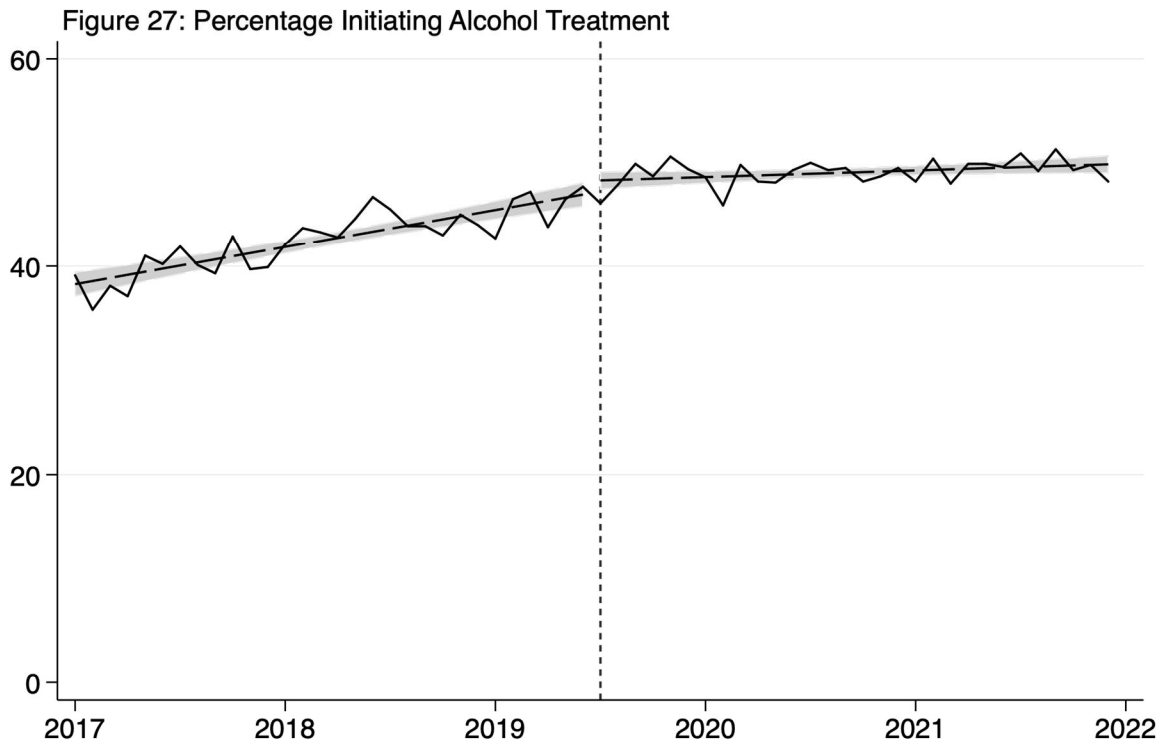
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of alcohol abuse or dependence who initiated treatment within 14 days of the diagnosis.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of alcohol abuse or dependence who initiated treatment within 14 days of the diagnosis. The denominator is the total number of index visits for alcohol abuse or dependence. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 27: Percentage Initiating Alcohol Treatment

	b/se/ci95
Pre-Period Slope	0.300*** (0.028) [0.244,0.355]
Level Change	1.064 (0.670) [-0.250,2.377]
Post-Period Slope	0.053** (0.021) [0.012,0.095]
Slope Change	-0.246*** (0.036) [-0.317,-0.176]
Pre-Period Mean	42.60
Pre-Period Min	35.80
Pre-Period Max	47.70
Post-Period Mean	49.08
Post-Period Min	45.90
Post-Period Max	51.30
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 28 – Percentage Engaged in Alcohol Treatment

Evaluation Demonstration Goal 3.2

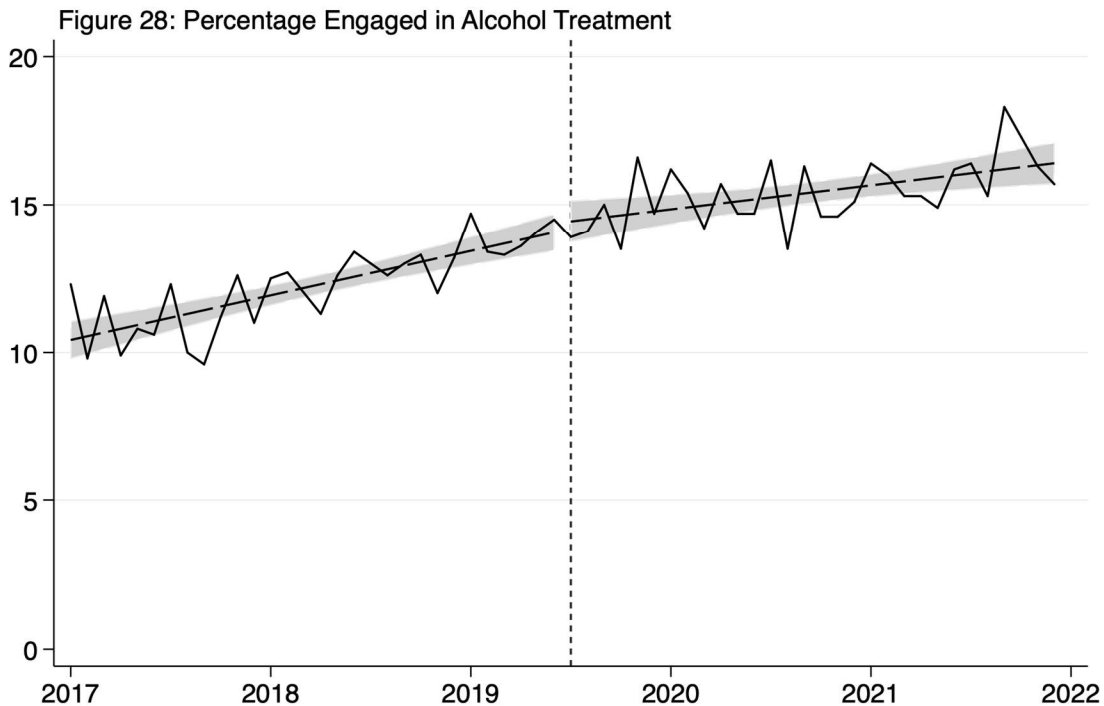
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of alcohol abuse or dependence who initiated treatment and who experienced at least 3 visits within 34 days of the initiation visit.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes:

The numerator is the total number beneficiaries age 18 and older with a new episode of alcohol abuse or dependence who initiated treatment and who were engaged in ongoing treatment within 34 days of the initiation visit. The denominator is the total number of index visits for alcohol abuse or dependence. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 28: Percentage Engaged in Alcohol Treatment

	b/se/ci95
Pre-Period Slope	0.125*** (0.014) [0.097,0.154]
Level Change	0.255 (0.321) [-0.374,0.884]
Post-Period Slope	0.068*** (0.016) [0.036,0.100]
Slope Change	-0.058*** (0.021) [-0.099,-0.016]
Pre-Period Mean	12.24
Pre-Period Min	9.60
Pre-Period Max	14.70
Post-Period Mean	15.42
Post-Period Min	13.50
Post-Period Max	18.30
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 29 – Percentage Initiating OUD Treatment

Evaluation Demonstration Goal 3.2

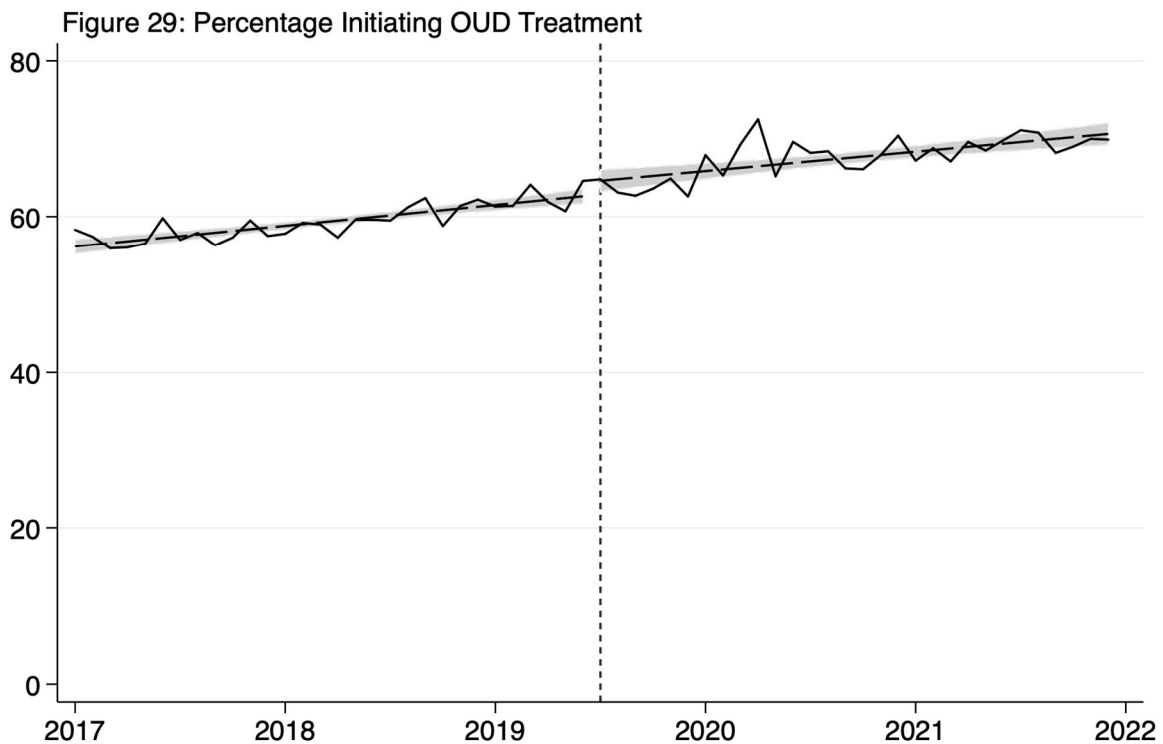
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated OUD treatment within 14 days of the diagnosis.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated OUD treatment within 14 days of the diagnosis. The denominator is the total number of index OUD visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 29: Percentage Initiating OUD Treatment

	b/se/ci95
Pre-Period Slope	0.224*** (0.021) [0.182,0.266]
Level Change	1.763 (1.102) [-0.396,3.922]
Post-Period Slope	0.207*** (0.046) [0.118,0.297]
Slope Change	-0.016 (0.048) [-0.111,0.078]
Pre-Period Mean	59.38
Pre-Period Min	55.90
Pre-Period Max	64.60
Post-Period Mean	67.62
Post-Period Min	62.60
Post-Period Max	72.50
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
p*<0.10, *p*<0.05, ****p*<0.01

Appendix Figure 30 – Percentage Engaged in OUD Treatment

Evaluation Demonstration Goal 3.2

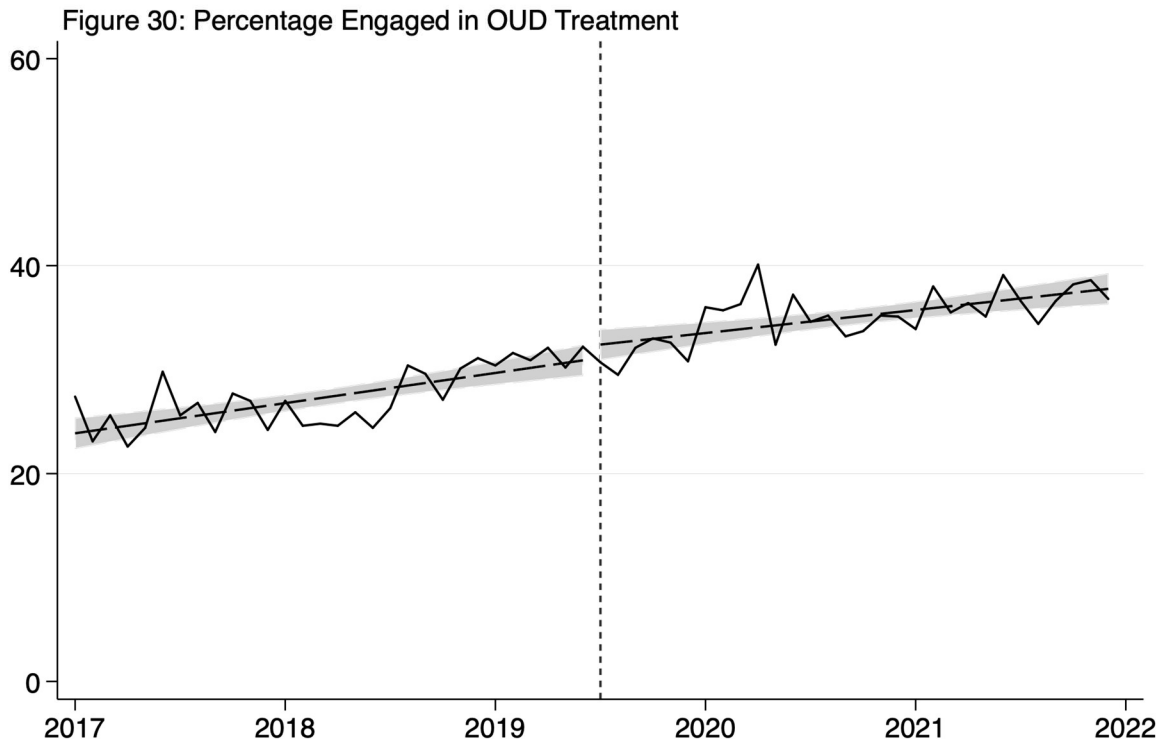
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated treatment and who experienced at least 3 visits within 34 days of the initiation visit.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated treatment and who were engaged in ongoing OUD treatment within 34 days of the initiation visit. The denominator is the total number of index OUD visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 30: Percentage Engaged in OUD Treatment

	b/se/ci95
Pre-Period Slope	0.242*** (0.041) [0.161,0.323]
Level Change	1.275 (1.458) [-1.583,4.134]
Post-Period Slope	0.185*** (0.047) [0.093,0.277]
Slope Change	-0.057 (0.057) [-0.169,0.055]
Pre-Period Mean	27.38
Pre-Period Min	22.60
Pre-Period Max	32.20
Post-Period Mean	35.09
Post-Period Min	29.50
Post-Period Max	40.10
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 31 – Percentage Initiating Other Drug Treatment

Evaluation Demonstration Goal 3.2

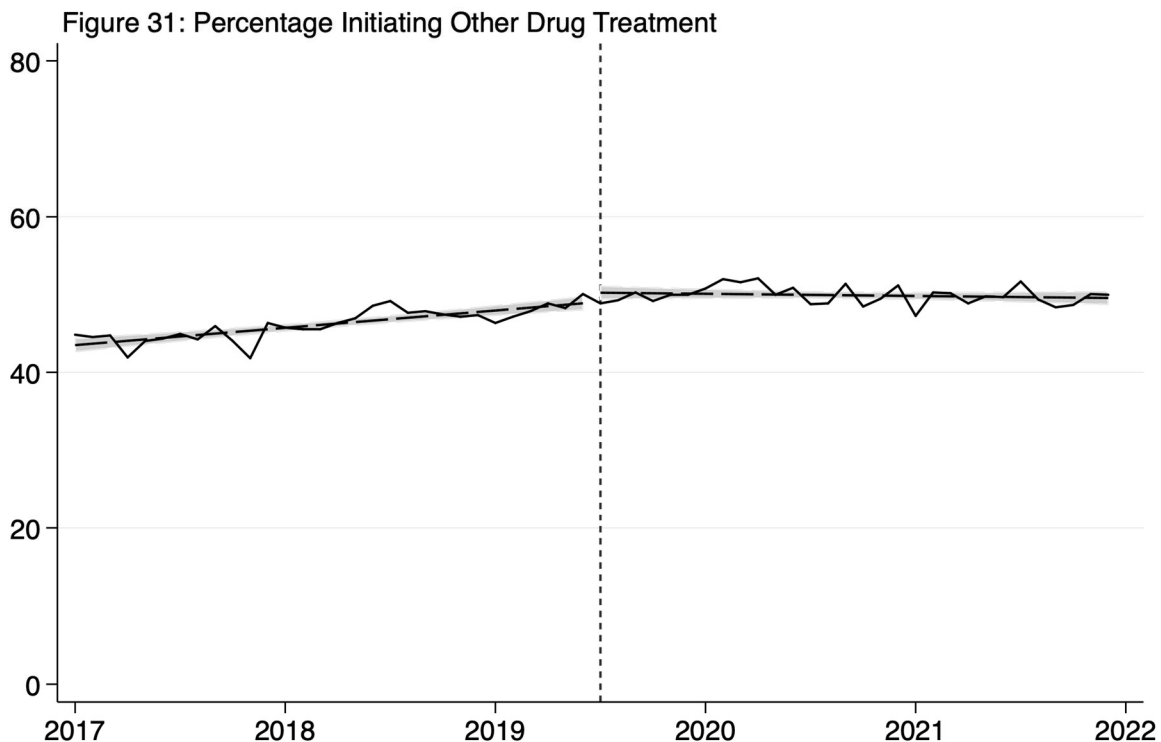
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of other drug abuse or dependence who initiated treatment within 14 days of the diagnosis.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of other drug abuse or dependence who initiated treatment within 14 days of the diagnosis. The denominator is the total number of index other drug visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 31: Percentage Initiating Other Drug Treatment

	b/se/ci95
Pre-Period Slope	0.184*** (0.022) [0.141,0.227]
Level Change	1.171 (0.751) [-0.302,2.643]
Post-Period Slope	-0.023 (0.025) [-0.072,0.025]
Slope Change	-0.208*** (0.031) [-0.268,-0.147]
Pre-Period Mean	46.14
Pre-Period Min	41.80
Pre-Period Max	50.00
Post-Period Mean	49.83
Post-Period Min	47.20
Post-Period Max	52.00
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 32 – Percentage Engaged in Other Drug Treatment

Evaluation Demonstration Goal 3.2

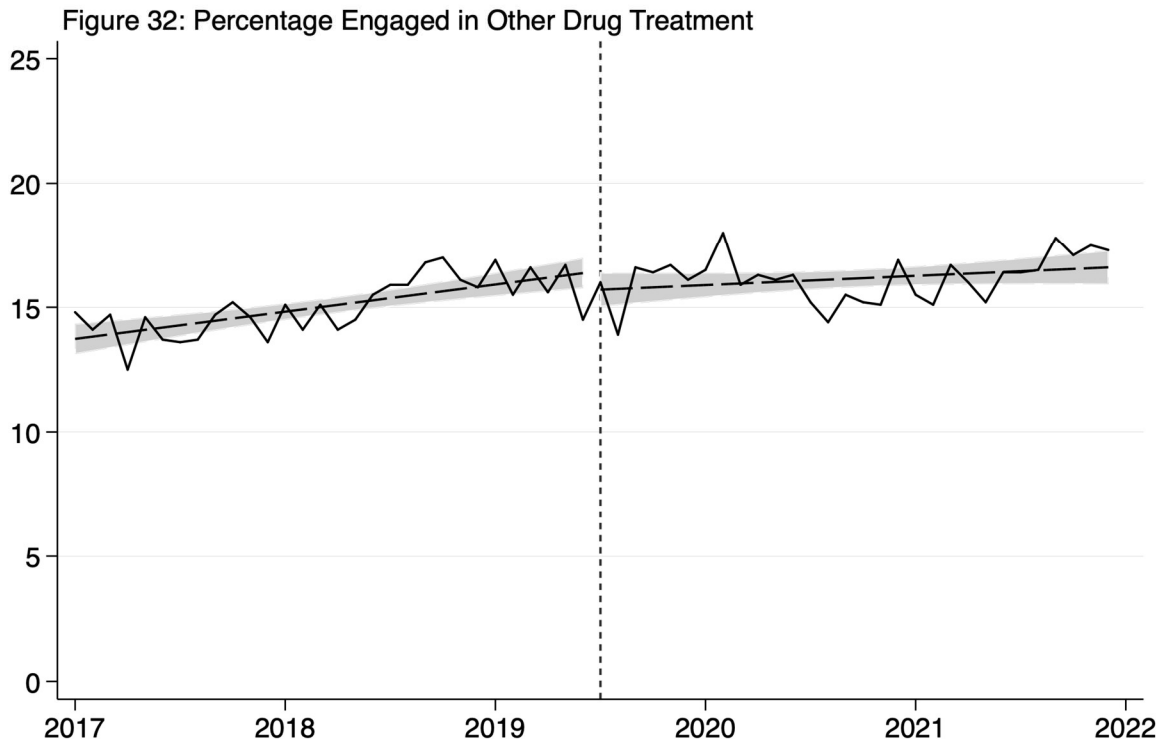
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of other drug abuse or dependence who initiated treatment and who experienced at least 3 visits within 34 days of the initiation visit.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of other drug abuse or dependence who initiated treatment and who were engaged in ongoing treatment within 34 days of the initiation visit. The denominator is the total number of index other drug visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 32: Percentage Engaged in Other Drug Treatment

	b/se/ci95
Pre-Period Slope	0.091*** (0.019) [0.053,0.129]
Level Change	-0.754 (0.571) [-1.874,0.365]
Post-Period Slope	0.031 (0.025) [-0.017,0.079]
Slope Change	-0.060* (0.032) [-0.122,0.002]
Pre-Period Mean	15.05
Pre-Period Min	12.50
Pre-Period Max	17.00
Post-Period Mean	16.15
Post-Period Min	13.90
Post-Period Max	18.00
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 33 – Percentage Initiating Alcohol or Other Drug Treatment

Evaluation Demonstration Goal 3.2

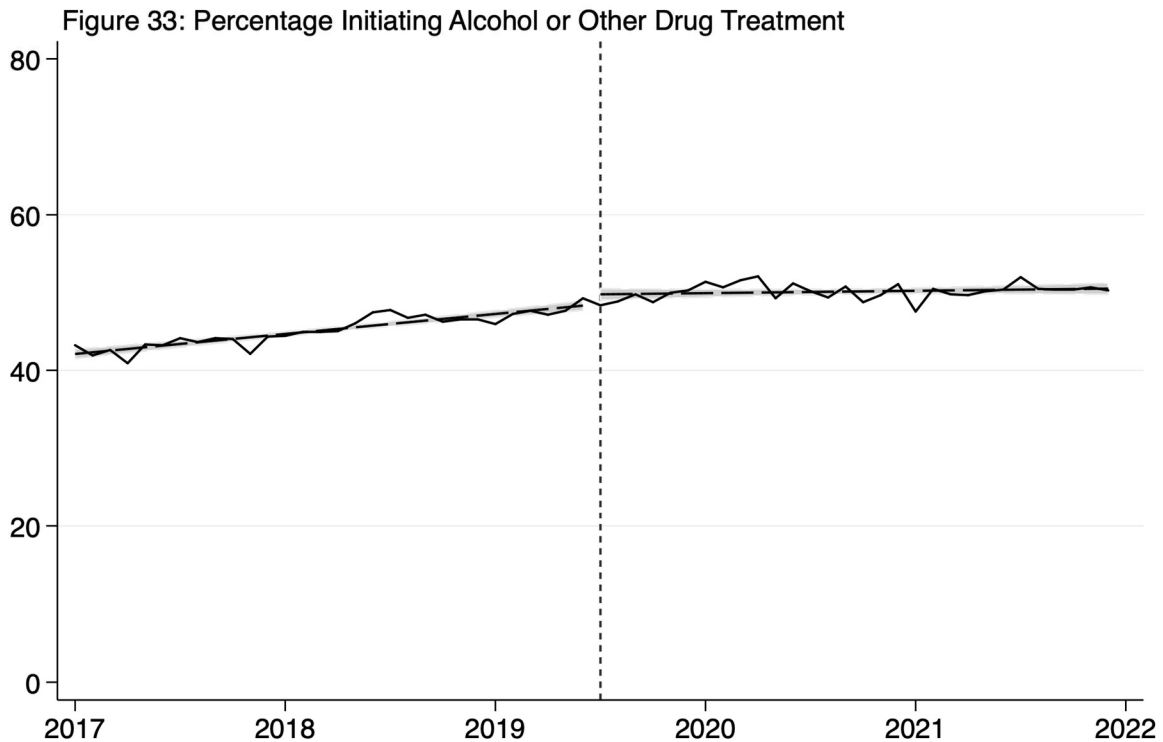
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of alcohol or other drug abuse or dependence (AOD) who initiated treatment within 14 days of the diagnosis.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of AOD abuse or dependence who initiated treatment within 14 days of the diagnosis. The denominator is the total number of index AOD visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 33: Percentage Initiating Alcohol or Other Drug Treatment

	b/se/ci95
Pre-Period Slope	0.213*** (0.015) [0.184,0.242]
Level Change	1.229* (0.663) [-0.071,2.530]
Post-Period Slope	0.025 (0.025) [-0.023,0.074]
Slope Change	-0.188*** (0.028) [-0.243,-0.133]
Pre-Period Mean	45.17
Pre-Period Min	40.90
Pre-Period Max	49.20
Post-Period Mean	50.07
Post-Period Min	47.50
Post-Period Max	52.00
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 34 – Percentage Engaged in Alcohol or Other Drug Treatment

Evaluation Demonstration Goal 3.2

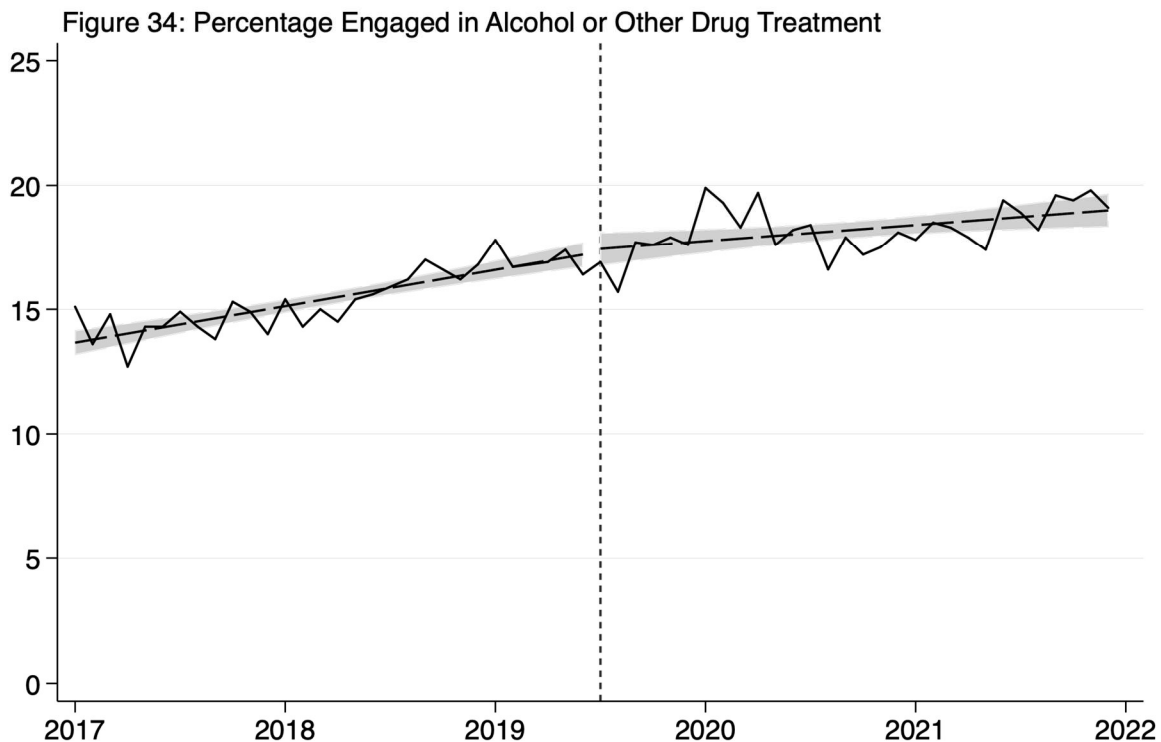
Monitoring Metric: #15, Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET-AD)

Description: Percentage of beneficiaries age 18 and older with a new episode of alcohol or other drug abuse or dependence (AOD) who initiated treatment and who experienced at least 3 visits within 34 days of the initiation visit.

Primary Driver: Increase adherence to and retention in treatment.

Secondary Drivers:

- Continued monitoring of MCO compliance with existing contract requirements related to care transition activities.
 - Status: Started 6/30/2019
 - Details: SUD specific audit tool elements were added to the MCO monitoring tool for the second quarter reviews in 2019. SUD providers are audited using both the general BH elements and the SUD specific elements. These reports are due 30 days after the end of the quarter being reviewed. “Continuity and Coordination of Care” and discharge planning are tracked components under table 3 of the TRR (Treatment Record Review) tab of the 358 Report. The 358 report template is on the LA – Medicaid website. LDH monitors a report generated by the MCOs who are contractually required to ensure continuity of care. The basis of the report is MCO utilization of the updated audit tool which contains SUD level of care specific elements including discharge planning/transfer planning and referrals.



Notes: The numerator is the total number beneficiaries age 18 and older with a new episode of AOD abuse or dependence who initiated treatment and who were engaged in ongoing treatment within 34 days of the initiation visit. The denominator is the total number of index AOD visits. Intervention date was assigned to July 2019 to correspond with the implementation of the first secondary driver associated with this outcome.

Appendix Table 34: Percentage Engaged in Alcohol or Other Drug Treatment

	b/se/ci95
Pre-Period Slope	0.122*** (0.013) [0.096,0.148]
Level Change	0.110 (0.532) [-0.932,1.152]
Post-Period Slope	0.054** (0.024) [0.006,0.101]
Slope Change	-0.068** (0.029) [-0.125,-0.011]
Pre-Period Mean	15.43
Pre-Period Min	12.70
Pre-Period Max	17.80
Post-Period Mean	18.21
Post-Period Min	15.70
Post-Period Max	19.90
Observations	60

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 35 – Count of Drug Overdose Deaths

Evaluation Demonstration Goal 4.1

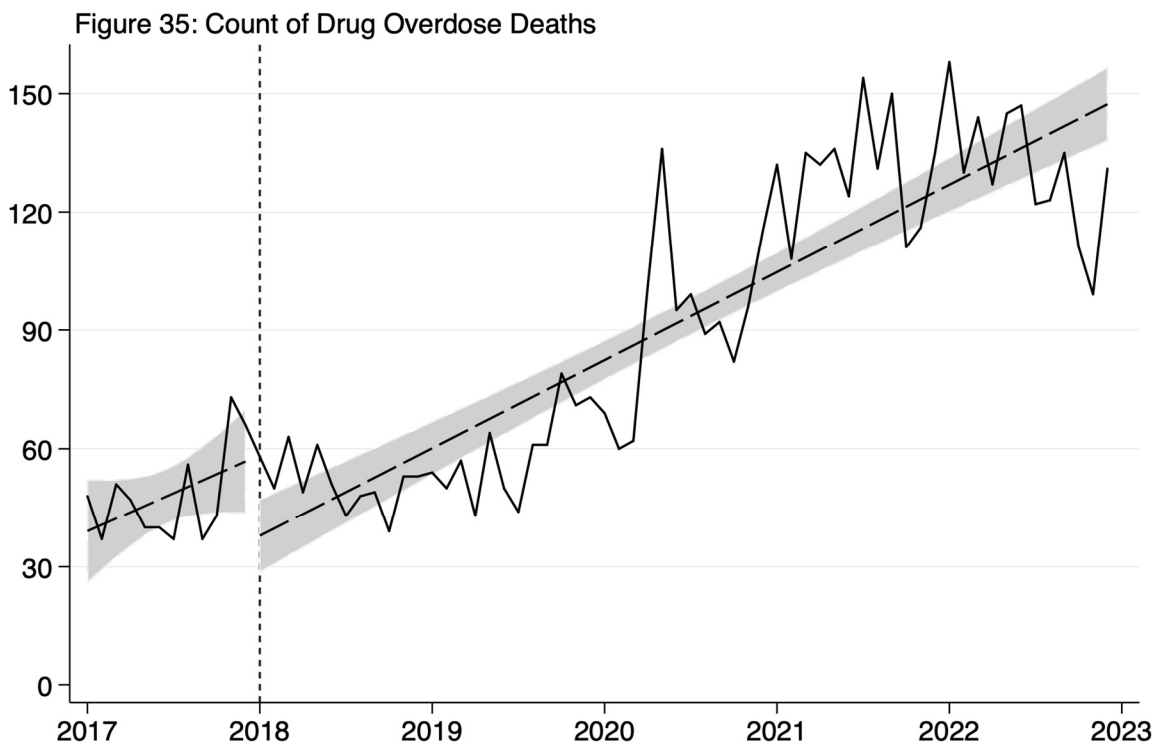
Monitoring Metric: #26, Count of Drug Overdose Deaths

Description: Number of overdose deaths during the measurement period among Medicaid beneficiaries living in a geographic area covered by the demonstration.

Primary Driver: Reduce instances of drug overdose and overdose deaths.

Secondary Drivers:

- Increased availability of Naloxone
 - Status: Ongoing
 - Details: The Secretary of LDH signed a standing order for dispensing Naloxone without a prescription on 1/23/2017. In addition to the standing order, there are previous and current grants in place funding distribution of naloxone. These grants include MAT-PDOA, STR, and LASOR.



Notes: The number of overdose deaths among eligible beneficiaries. Intervention date was assigned to the first quarter of the demonstration period. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 35: Count of Drug Overdose Deaths

	b/se/ci95
Pre-Period Slope	1.612** (0.749)
Level Change	[0.144,3.080] -20.519*** (7.688)
Post-Period Slope	[-35.587,-5.451] 1.855*** (0.238)
Slope Change	[1.388,2.322] 0.243 (0.832)
	[-1.387,1.874]
Pre-Period Mean	47.92
Pre-Period Min	37
Pre-Period Max	73
Post-Period Mean	92.60
Post-Period Min	39
Post-Period Max	158
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 35a – Count of Drug Overdose Deaths – COVID Adjustment

Evaluation Demonstration Goal 4.1

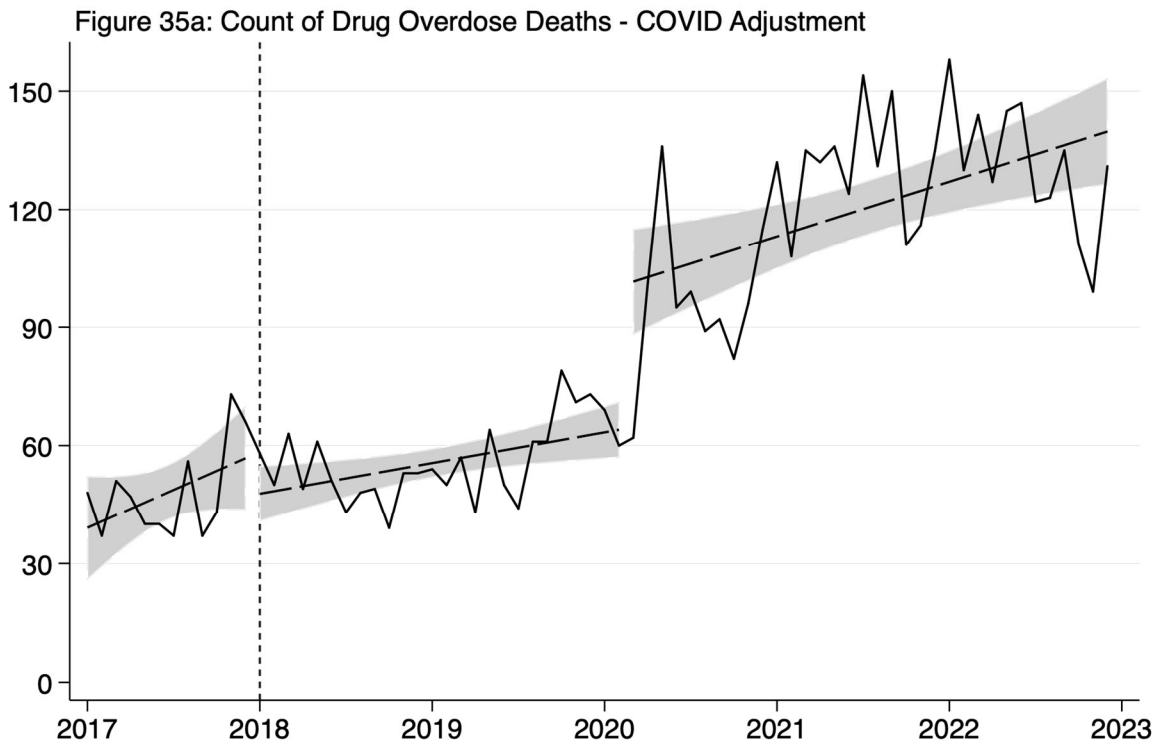
Monitoring Metric: #26, Count of Drug Overdose Deaths

Description: Number of overdose deaths during the measurement period among Medicaid beneficiaries living in a geographic area covered by the demonstration.

Primary Driver: Reduce instances of drug overdose and overdose deaths.

Secondary Drivers:

- Increased availability of Naloxone
 - Status: Ongoing
 - Details: The Secretary of LDH signed a standing order for dispensing Naloxone without a prescription on 1/23/2017. In addition to the standing order, there are grants in place funding distribution of naloxone. These grants include MAT-PDOA, STR, and LASOR.



Notes: The number of overdose deaths among eligible beneficiaries. Intervention date was assigned to the first quarter of the demonstration period. Intervention date was assigned to the first quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 35a: Count of Drug Overdose Deaths - COVID Adjustment

	b/se/ci95
Pre-Period Slope	1.61** (0.76)
Demonstration Level Change	[0.12,3.10] -10.64* (5.90)
Post-Demonstration Slope	[-22.20,0.92] 0.65** (0.33)
Post-Demonstration Slope Change	[0.01,1.29] -0.96 (0.93)
COVID Level Change	[-2.78,0.86] 36.89*** (10.54)
Post-COVID Slope	[16.22,57.55] 1.16** (0.48)
Post-COVID Slope Change	[0.21,2.11] 0.51 (0.56)
	[-0.59,1.60]
Pre-Period Mean	47.92
Pre-Period Min	37
Pre-Period Max	73
Post-Period Mean	92.60
Post-Period Min	39
Post-Period Max	158
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 36 – Drug Overdose Deaths per 1,000 Beneficiaries

Evaluation Demonstration Goal 4.1

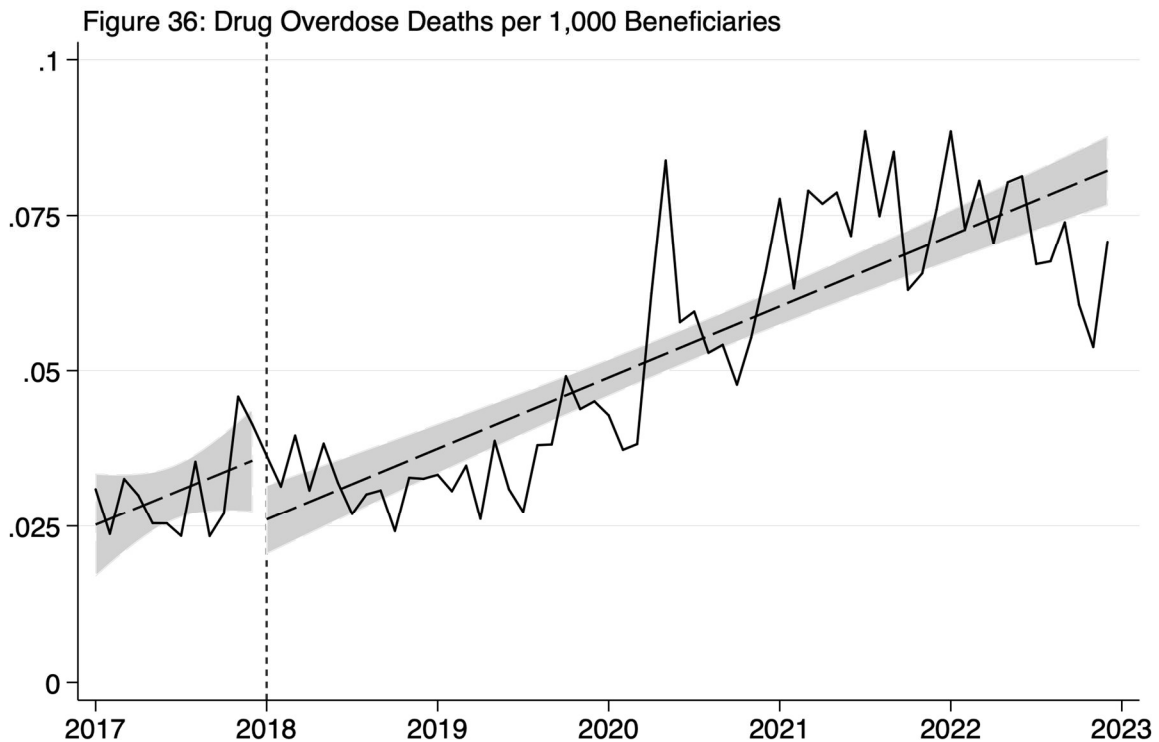
Monitoring Metric: #27, Drug Overdose Deaths per 1,000 Beneficiaries

Description: Rate of overdose deaths during the measurement period among adult Medicaid beneficiaries living in a geographic area covered by the demonstration. Rate is per 1,000 beneficiaries.

Primary Driver: Reduce instances of drug overdose and overdose deaths.

Secondary Drivers:

- Increased availability of Naloxone
 - Status: Ongoing
 - Details: The Secretary of LDH signed a standing order for dispensing Naloxone without a prescription on 1/23/2017. In addition to the standing order, there are grants in place funding distribution of naloxone. These grants include MAT-PDOA, STR, and LASOR.



Notes: The numerator is the total number of overdose deaths among eligible beneficiaries. The denominator is the number of beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period or the 30 days prior to the beginning of the measurement period. The ratio of overdose deaths to eligible beneficiaries is multiplied by 1,000. Intervention date was assigned to the first quarter of the demonstration period.

Appendix Table 36: Drug Overdose Deaths per 1,000 Beneficiaries

	b/se/ci95
Pre-Period Slope	0.001** (0.000)
Level Change	[0.000,0.002] -0.010** (0.005)
Post-Period Slope	[-0.020,-0.001] 0.001*** (0.000)
Slope Change	[0.001,0.001] 0.000 (0.001)
	[-0.001,0.001]
Pre-Period Mean	0.030
Pre-Period Min	0.023
Pre-Period Max	0.046
Post-Period Mean	0.054
Post-Period Min	0.024
Post-Period Max	0.089
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix Figure 36a - Drug Overdose Deaths per 1,000 Beneficiaries – COVID Adjustment

Evaluation Demonstration Goal 4.1

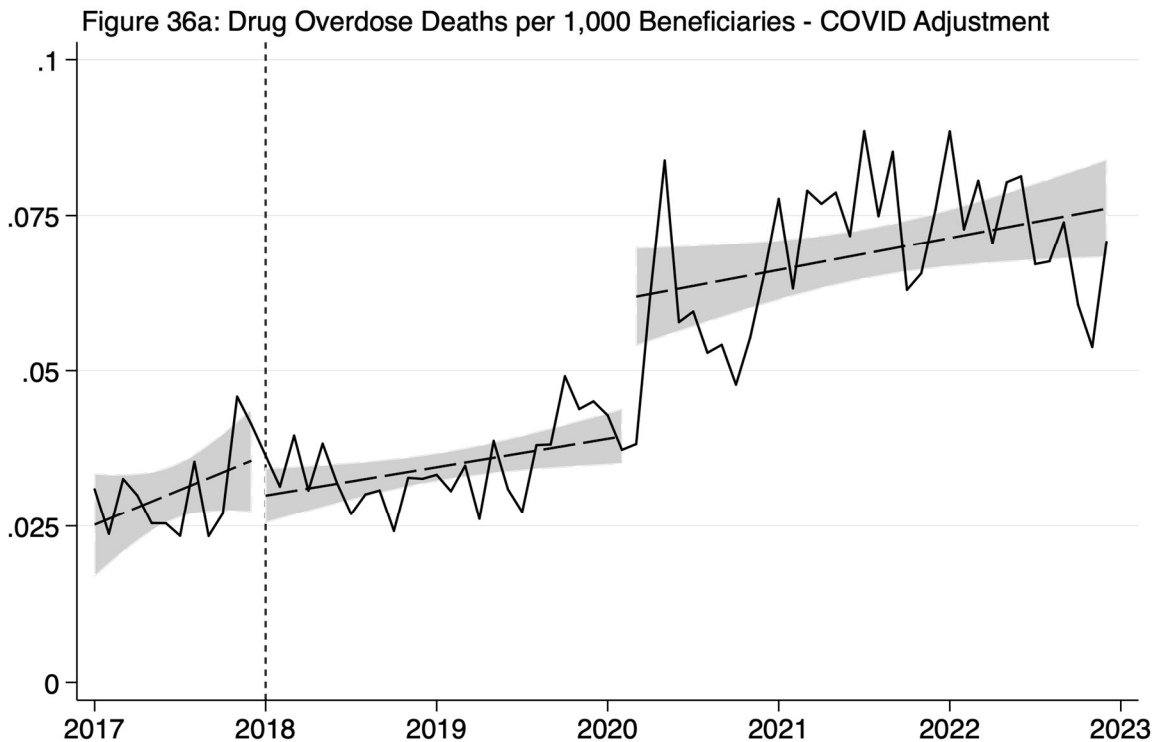
Monitoring Metric: #27, Drug Overdose Deaths per 1,000 Beneficiaries

Description: Rate of overdose deaths during the measurement period among adult Medicaid beneficiaries living in a geographic area covered by the demonstration. Rate is per 1,000 beneficiaries.

Primary Driver: Reduce instances of drug overdose and overdose deaths.

Secondary Drivers:

- Increased availability of Naloxone
 - Status: Ongoing
 - Details: The Secretary of LDH signed a standing order for dispensing Naloxone without a prescription on 1/23/2017. In addition to the standing order, there are grants in place funding distribution of naloxone. These grants include MAT-PDOA, STR, and LASOR.



Notes: The numerator is the total number of overdose deaths among eligible beneficiaries. The denominator is the number of beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period or the 30 days prior to the beginning of the measurement period. The ratio of overdose deaths to eligible beneficiaries is multiplied by 1,000. Intervention date was assigned to the first quarter of the demonstration period. A second intervention period was included in April 2020 to allow for a post-COVID-19 trend break.

Appendix Table 36a: Drug Overdose Deaths per 1,000 Beneficiaries - COVID Adjustment

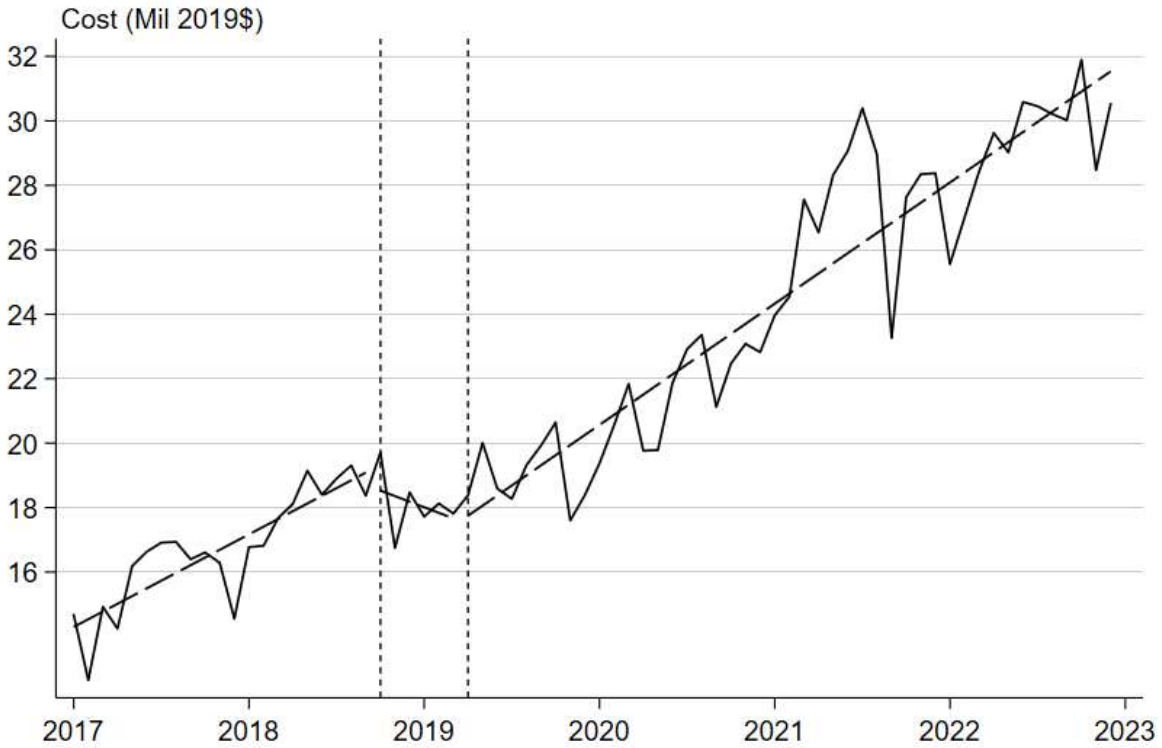
	b/se/ci95
Pre-Period Slope	0.0009** (0.0005) [0.0000,0.0019]
Demonstration Level Change	-0.0066* (0.0037) [-0.0139,0.0008]
Post-Demonstration Slope	0.0004* (0.0002) [-0.0000,0.0008]
Post-Demonstration Slope Change	-0.0006 (0.0006) [-0.0017,0.0006]
COVID Level Change	0.0220*** (0.0064) [0.0095,0.0346]
Post-COVID Slope	0.0004 (0.0003) [-0.0001,0.0010]
Post-COVID Slope Change	0.0001 (0.0003) [-0.0006,0.0007]
Pre-Period Mean	0.030
Pre-Period Min	0.023
Pre-Period Max	0.046
Post-Period Mean	0.054
Post-Period Min	0.024
Post-Period Max	0.089
Observations	72

Notes: Standard errors are in parentheses and 95% confidence intervals are in brackets.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

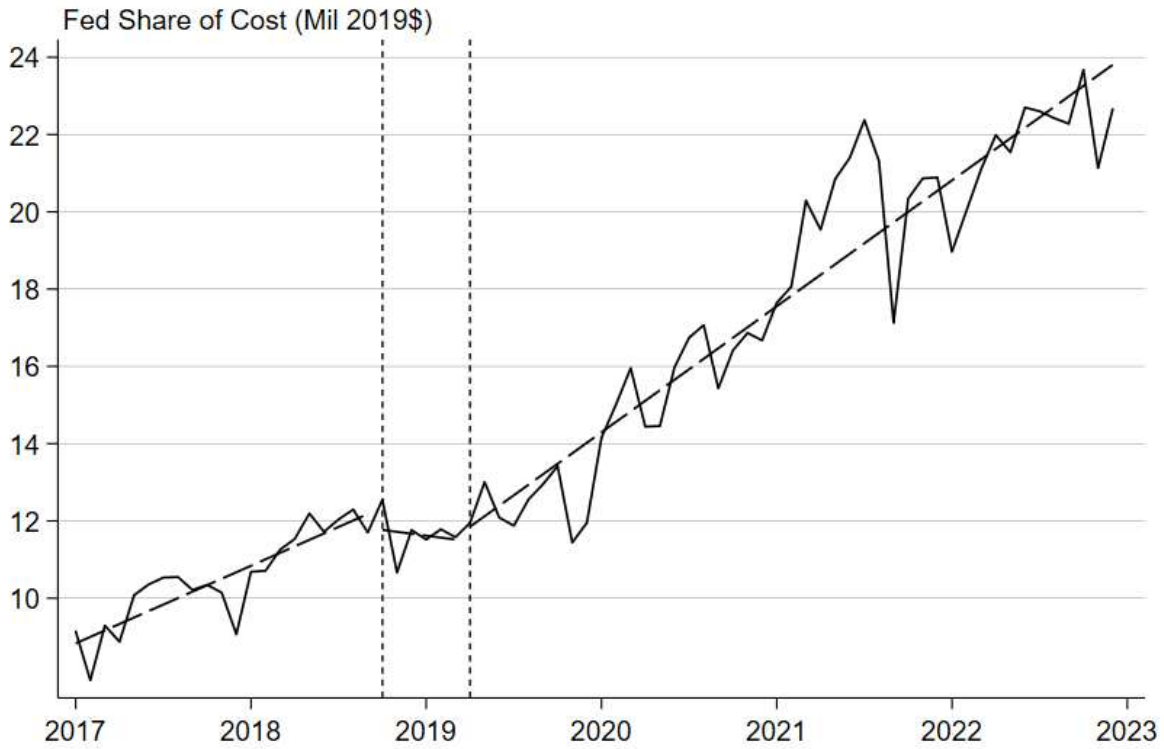
Required Evaluation Topic: Demonstrate patterns and trends in Medicaid costs associated with SUD 1115 demonstration

Total Cost Louisiana Substance Use Disorder Waiver – Interrupted Time Series



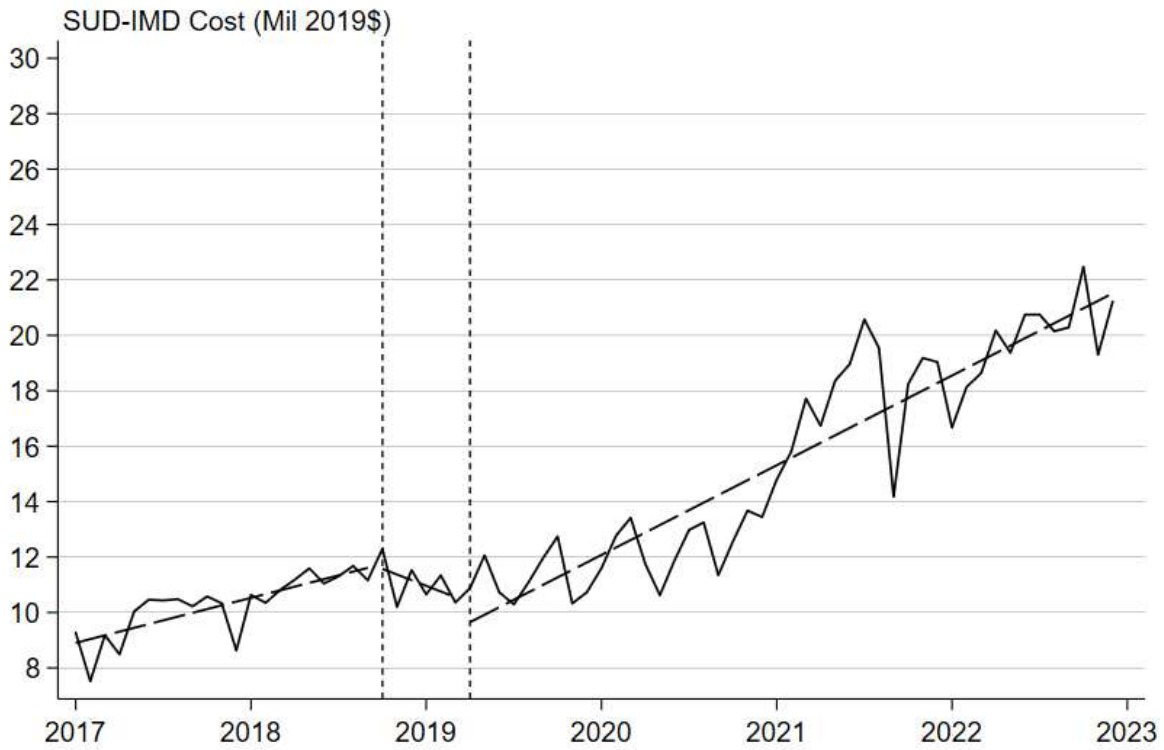
Definition: Total cost consists of waiver administration costs, Emergency Department visits, stays in an Institution for Mental Disease, treatment costs by American Society of Addiction Medicine Level, and medication assisted therapy costs. Data source: Louisiana Department of Health time use survey, Louisiana Medicaid claims, Louisiana Medicaid Fee Schedule, Federal Supply Schedule.

Federal Share of Louisiana Substance Use Disorder Waiver Cost – Interrupted Time Series



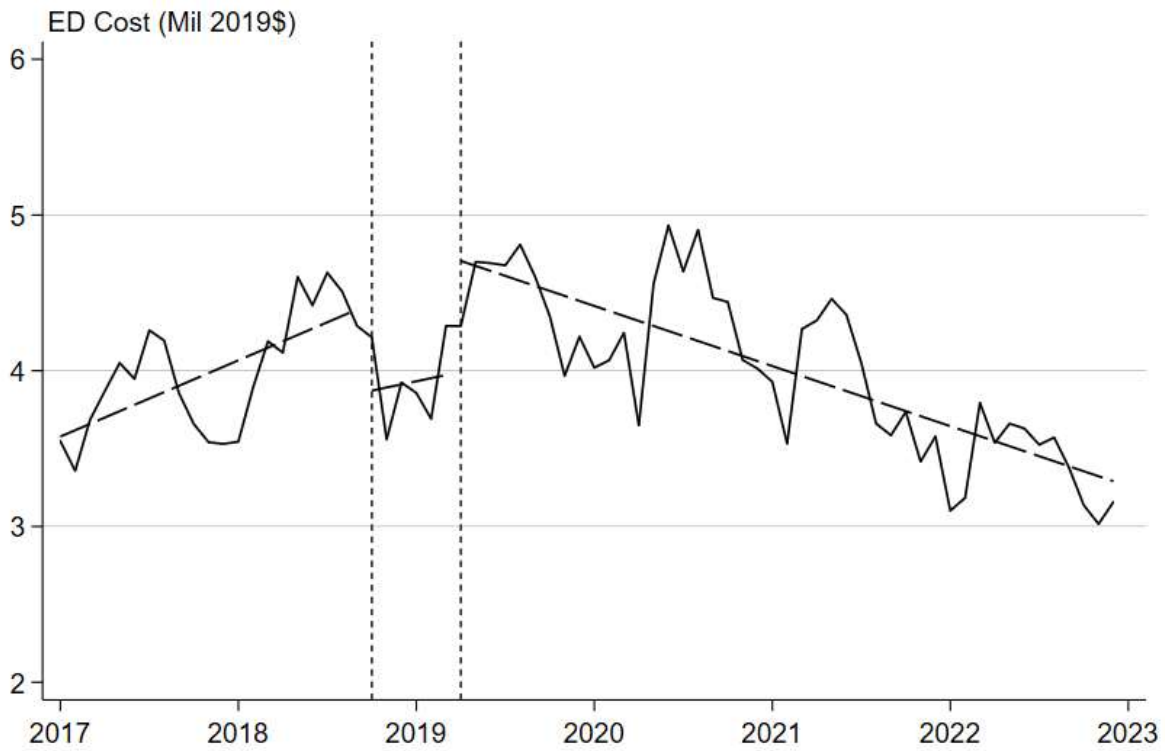
Definition: Total cost multiplied by annual Federal Medical Assistance Percentage (FMAP) for Louisiana. Data source: Louisiana Department of Health time use survey, Louisiana Medicaid claims, Louisiana Medicaid Fee Schedule, Federal Supply Schedule, Kaiser Family Foundation.

Cost of Medicaid Beneficiaries Treated in an Institution for Mental Diseases – Interrupted Time Series



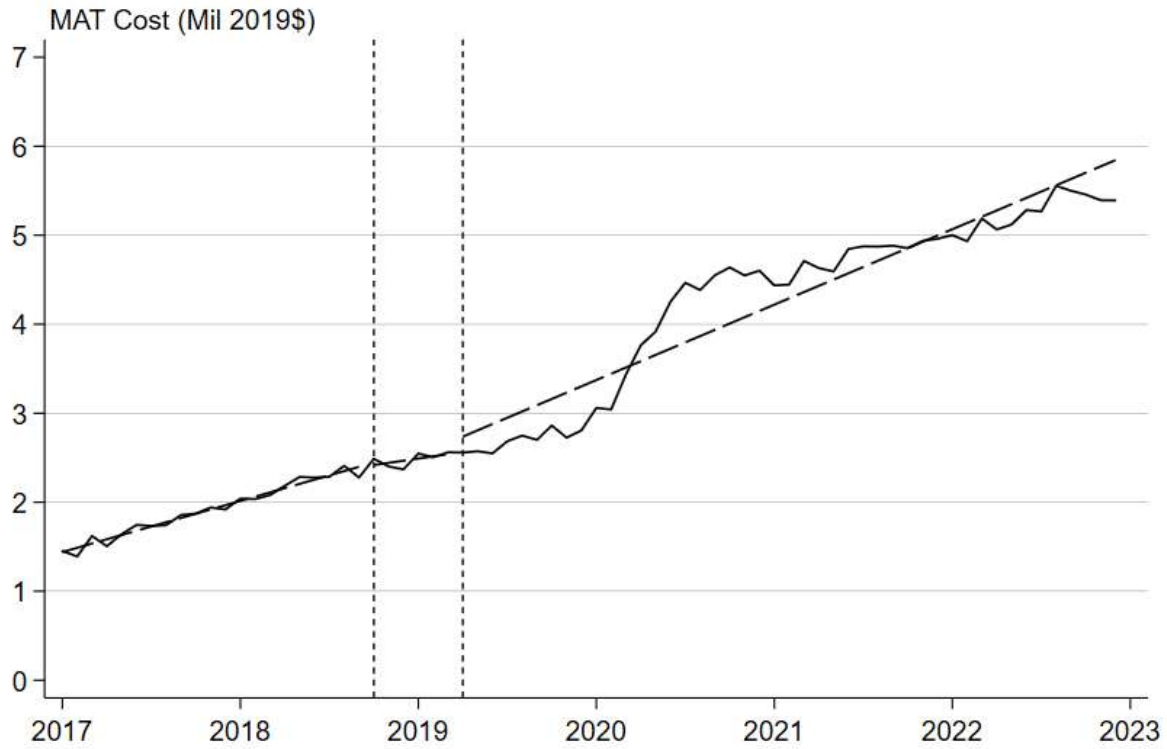
Definition: The product of the number of beneficiaries that stay in an IMD, the average length of stay, and daily cost. Data source: Louisiana Medicaid claims, Louisiana Medicaid Fee Schedule.

Cost of Medicaid Beneficiaries' Emergency Department Visits – Interrupted Time Series



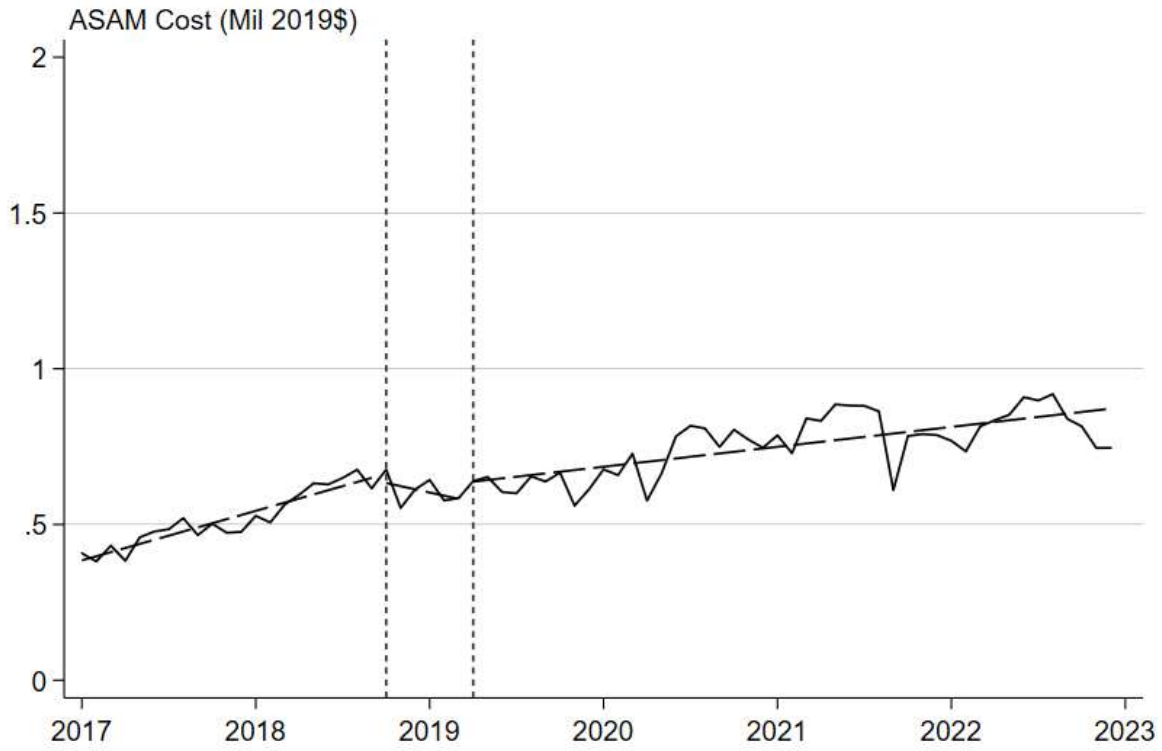
Definition: The product of the number of beneficiaries that visit an ED and cost. Data source: Louisiana Medicaid claims, Louisiana Medicaid Fee Schedule.

Cost of Medication-Assisted Treatment– Interrupted Time Series



Definition: The product of the number of beneficiaries that use MAT, duration of treatment, and daily cost. Data source: Louisiana Medicaid claims, Federal Supply Schedule.

Cost of ASAM Care – Interrupted Time Series



Definition: The product of each level of care and cost for that level of care. Data source: Louisiana Medicaid claims, Louisiana Medicaid Fee Schedule.

Interrupted Time Series Estimates of Cost

	Total Cost	Federal Share of Total Cost	SUD-IMD Cost	ED Cost	MAT Cost	ASAM Cost
Trend	0.239***	0.167***	0.135***	0.041***	0.048***	0.013***
	(0.032)	(0.02)	(0.024)	(0.008)	(0.003)	(0.001)
Post1	8.281	4.203	7.299*	-0.103	0.491	0.486**
	(5.972)	(3.935)	(4.164)	(1.957)	(0.314)	(0.237)
Post2	-13.363**	-8.624**	-13.971***	2.172	-1.123***	-0.369
	(6.003)	(3.971)	(4.213)	(1.962)	(0.372)	(0.242)
Post x Trend1	-0.413*	-0.217	-0.340**	-0.021	-0.024*	-0.023**
	(0.232)	(0.153)	(0.164)	(0.079)	(0.012)	(0.009)
Post x Trend2	0.486**	0.322**	0.474***	-0.052	0.046***	0.016*
	(0.23)	(0.152)	(0.162)	(0.079)	(0.013)	(0.009)
Baseline Mean	16.7	10.5	10.3	4	1.9	0.5
R ²	0.929	0.949	0.903	0.575	0.964	0.831
Observations	72	72	72	72	72	72

Notes: All costs are in millions of 2019\$. Coefficient definitions are as follows: *Trend* represents the pre-intervention estimate of the slope of the linear trend in the outcome variable; *Post1* and *Post2* are indicators for level changes in outcomes coinciding with the intervention periods; *Post x Trend1* and *Post X Trend2* represent the post-intervention change in the slope of the linear trend compared to the pre-intervention period. The baseline mean is calculated as the mean of the outcome variable in the pre-intervention period. Heteroskedasticity-robust standard errors are presented in parentheses below the coefficient estimates. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Notes about imputation of 2017 IMD values:

All values are based on values reported as part of the monitoring protocol except for values relating to beneficiaries treated in an institution of mental disease. But IMD stays are a component of total costs, so we use the 2018 list of institutions of mental disease and calculate the number of patients staying in IMDs in 2017 and 2018 using the 2018 facility definition. We then scale our 2017 monthly calculations by the ratio between the Louisiana Department of Health's 2018 annual total and Tulane's 2018 annual total. We also repeat this imputation process to obtain 2017 estimates of the length of stay in an IMD. This procedure applies to the number of patients in an IMD (Monitoring Metric 5) and the length of stay in an IMD (Monitoring Metric 36).