DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-25-26
Baltimore, Maryland 21244-1850

State Demonstrations Group

May 29, 2024

Christine Osterlund
Medicaid Director
Department of Health and Environment
900 SW Jackson Avenue, Suite 900
Topeka, KS 66612

Dear Director Osterlund:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the KanCare Interim Evaluation Report, which is required by the Special Terms and Conditions (STCs), specifically STC #102 "Interim Evaluation Report" of the Kansas "KanCare" (Project No: 11-W-00283/7). This Interim Evaluation Report covers the period from January 2019 through December 2021. CMS determined that the Evaluation Report, submitted on October 17, 2022 and revised on June 20, 2023, is in alignment with the CMS-approved Evaluation Design and the requirements set forth in the STCs, and therefore, approves the state's Interim Evaluation Report.

The Interim Evaluation Report is clearly written and structured, and provided a descriptive assessment of the progress towards the demonstration goals during the initial years of the demonstration approval period. The report incorporates a broad array of data sources and relevant outcome measures. The findings of the Interim Evaluation Report provide evidence that Kansas made progress toward its demonstration goals. For example, adult access to preventive/ambulatory health services and rates of ED, observation stays, and inpatient admissions for specified health conditions improved. The SUD-specific findings showed that measures of initiation and engagement in alcohol and other drug treatment modestly improved between 2017 and 2020. The state's Summative Evaluation Report is expected to provide a fuller understanding of the demonstration's effectiveness using advanced statistical analysis and leveraging additional years of data that may enable separating out the confounding effects of the COVID-19 PHE from those of the demonstration itself more effectively.

In accordance with STC #105, the approved Evaluation Report may now be posted to the state's Medicaid website within 30 days. CMS will also post the Interim Evaluation Report on Medicaid.gov.

We look forward to our continued partnership on the Kansas KanCare Medicaid 1115 Demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly -S

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Date: 2024.05.29 09:26:46 -04'00'

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

cc: Helenita Augustus, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

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Independent Review Organization: External Review
Expires 06/01/2024

KanCare 2.0 Interim Evaluation Report

Evaluation of the State of Kansas Medicaid Section 1115(a) Demonstration Substance Use Disorder

Reporting Period – January 2019 – October 2021

Contract Number: 46100

Submission Date: October 17, 2022
Revision Date: June 14, 2023

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Substance Use Disorder

Reporting Period – January 2019 – October 2021

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Evaluation of the State of Kansas Medicaid Section 1115(a) Demonstration

Substance Use Disorder

Reporting Period – January 2019 – October 2021

KanCare 2.0 Interim Evaluation Report
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Executive Summary

Substance Use Disorder Demonstration Overview

KanCare, the Kansas statewide mandatory Medicaid managed care program, was implemented January 1, 2013, under authority of a waiver through Section 1115 of the Social Security Act. The initial demonstration was approved for five years, with a subsequent one-year extension. CMS approved the KanCare 2.0 Section 1115 Substance Use Disorder (SUD) Demonstration Implementation Plan for the period of January 1, 2019, through December 31, 2023.

The Implementation Plan outlines the State's strategy to provide a full continuum of services for SUD treatment to KanCare members. It is in alignment with the overall KanCare 2.0 goals that were designed to provide efficient and effective health care services and to ensure coordination of care and integration of physical health (PH), behavioral health (BH), and Home and Community Based Services (HCBS). KanCare 2.0 provides access to all critical levels of care for SUD and opioid use disorder (OUD). The three KanCare managed care organizations (MCOs) provide access to a range of services across much of the American Society of Addiction Medicine (ASAM) levels of care. The spectrum of care—which includes outpatient treatment, peer recovery support, intensive outpatient services, medication-assisted treatment (MAT), intensive inpatient services, withdrawal management, and residential treatment—is provided to eligible Medicaid and CHIP recipients who need SUD or OUD treatment. In addition, all members aged 19 through 64 have access to additional covered services, including SUD treatment services provided to individuals with SUD who are short-term residents in residential treatment facilities that meet the definition of an IMD. Since 2020, KanCare covers methadone for MAT as required by the SUPPORT Act. Through the Implementation Plan, Kansas requires all inpatient residential treatment centers, including all those previously excluded as Institutions for Mental Disease (IMDs), to provide access to MAT through direct provision or by coordinated referral and treatment initiation to a MAT provider. This requirement was implemented through State policy instead of the initially planned licensing requirement.

KanCare 2.0 requires the provision of person-centered case management, as a one-on-one goal-directed service for individuals with a SUD, to assist in obtaining access to needed family, legal, medical, employment, educational, psychiatric, and other services. This service must be a part of the treatment plan developed and determined medically necessary by the MCO.

KanCare 2.0 Section 1115 SUD Demonstration Goals

Kansas uses the 1115 demonstration authority to pursue the following goals to improve access to and quality of treatment for KanCare 2.0 program members with SUD:

1. Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.
2. Reduced utilization of emergency departments (EDs) and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.
3. Reduction in overdose deaths, particularly those due to opioids.
4. Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.
5. Improved access to care for physical health conditions among members with OUD or other SUDs.

The following driver diagram for the overall SUD demonstration (Figure ES-1) shows the relationship between the demonstration's purpose, the primary drivers that contribute directly to achieve the purpose, and the secondary drivers necessary to achieve the primary drivers.

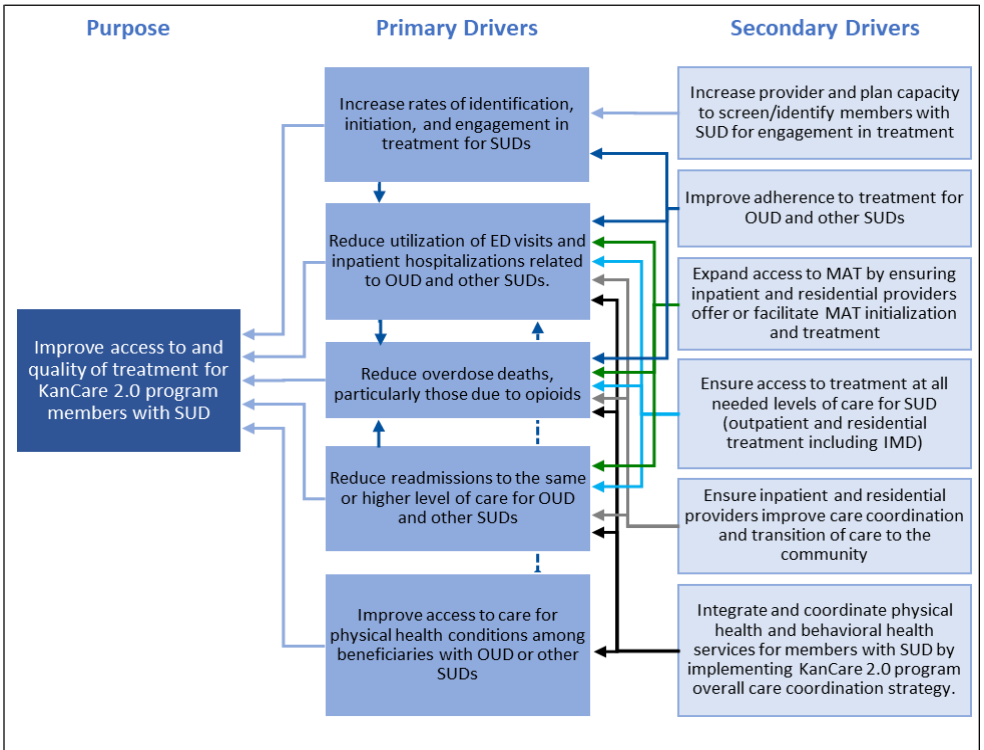

Figure ES-1. KanCare 2.0 Section 1115 SUD Demonstration Driver Diagram

SUD Demonstration Goals, Evaluation Questions, and Hypotheses

As the focus of the SUD Demonstration evaluation is to examine whether the demonstration achieved its goals, the following evaluation questions were designed in alignment with the five goals and related hypotheses (Table ES-1). This evaluation is in accordance with the CMS-approved "SUD, Section 1115 Demonstration Evaluation Design" (Attachment A).

Table ES-1. SUD Demonstration Goals, Evaluation Questions, and Hypotheses			
	Goals	**Evaluation Questions**	**Hypotheses**
1.	Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.	Does the demonstration increase access to and utilization of SUD treatment services?	The demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.
2	Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.	Does the demonstration decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population?	The demonstration will decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population.
3.	Reductions in overdose deaths, particularly those due to opioids.	Are rates of opioid-related overdose deaths impacted by the demonstration?	The demonstration will decrease the rate of overdose deaths due to opioids.
4.	Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.	Do enrollees receiving SUD services experience reduction in readmissions to the same or higher level of care for OUD and other SUDs?	Among members receiving care for SUD, the demonstration will reduce readmissions to SUD treatment.
5.	Improved access to care for physical health conditions among members with OUD or other SUDs.	Do enrollees receiving SUD services experience improved access to care for physical health conditions?	The demonstration will increase the percentage of members with SUD who access care for physical health conditions.

KanCare 2.0 Demonstration Hypothesis 4

(Associated with SUD Demonstration Evaluation Design Question 1)

Removing payment barriers for services provided in IMDs for KanCare members is a strategy in both the KanCare 2.0 Demonstration (Hypothesis 4) and SUD Demonstrations (Goal 1). To avoid duplicating evaluation activities, KanCare 2.0 Hypothesis 4 is addressed within the SUD Demonstration evaluation per CMS recommendation (Table ES-2).

Table ES-2. KanCare 2.0 Demonstration Hypothesis 4 and Evaluation Question	
Hypothesis	**Evaluation Question**
Removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members will result in improved member access to substance use disorder (SUD) treatment services.	Did removing payment barriers for services provided in IMDs for KanCare members improve member access to SUD treatment services?

Interim Evaluation of Substance Use Disorder Demonstration

In accordance with CMS guidelines, the KanCare 2.0 SUD Demonstration evaluation design was submitted for CMS approval. The CMS review of the evaluation design was received April 2, 2020. An updated evaluation design as per CMS guidance and feedback was submitted, and it was approved by CMS on June 30, 2020.

KFMC Health Improvement Partners (KFMC), under contract with the Kansas Department of Health and Environment (KDHE), Division of Health Care Finance (DHCF), serves as the External Quality Review Organization (EQRO) for KanCare. As the EQRO, KFMC is conducting the required SUD Demonstration evaluation and has prepared this interim evaluation report to reflect evaluation progress and presently available findings for January 2019 through December 2021.

Substance Use Disorder Demonstration Interim Evaluation Results

The interim evaluation included the assessment of performance measures for the five goals of the SUD Demonstration (*outcome evaluation*). It should be noted, the demonstration goals are also referred as *primary drivers*. The analytical results and interpretation of the outcome measures assessing the goals will follow discussion of the assessment of six secondary drivers (*process evaluation*). All results should be interpreted with caution as the evaluation period corresponded with the onset and continuation of the COVID-19 pandemic. The data and analytical results for 2022 and 2023 will better assess progress towards the demonstration goals.

Outcome Evaluation

Goal 1 (Primary Driver 1)

The performance measures assessed to evaluate Goal 1 are described in Table ES-3.

Table ES-3. Performance Measures for SUD Demonstration Goal 1
Outcome Measures for Goal 1 (Primary Driver 1)
• Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Initiation. (2017–2020)
• Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Engagement. (2017–2020)
Process Measures for Secondary Drivers
Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment (Relates to Goal 1)
• Percentage of physical health and behavioral health service providers that billed *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) services. (Not included in interim evaluation)
• Receipt of care for SUD and/or OUD after SBIRT service. (2017–2021)
Improve adherence to treatment for OUD and other SUDs (Related to Goals 1–3)
• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22). (2019–2020)
• Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2020)
• Percentage of beneficiaries with SUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2021)*
• Percentage of beneficiaries with OUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2021)*
• Percentage of beneficiaries with SUD diagnosis who used SUD peer support services. (2017–2021)
*Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12)

Key Results and Conclusions

The findings indicated improvement towards this goal. However, low rates for both outcome measures indicated further improvement is needed. The main findings related to the outcome measures are summarized below.

- The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) rates for initiation of treatment within 14 days of SUD diagnosis had an increasing trend from 2017 to 2020, with an average increase of 3 percentage points per year. The Quality Compass rankings (a

comparison to national percentiles) for the measure also improved.

- The 2019 and 2020 rates for continued engagement within 34 days of the initial treatment were greater than the 2017 and 2018 rates; the average increase was 0.5 percentage points per year. The rates for engagement within 34 days provided weaker supporting evidence.
- The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days, Engagement within 34 days) were low. Rates improved in 2020; however, further improvement is needed.

Goal 2 (Primary Driver 2)

The performance measures assessed to evaluate Goal 2 are described in Table ES-4.

Table ES-4. Performance Measures for SUD Demonstration Goal 2

Outcome Measures for Goal 2 (Primary Driver 2)
• ED utilization for SUD per 1,000 Medicaid beneficiaries. (CMS Metric #23; 2017–2021) • ED utilization for OUD per 1,000 Medicaid beneficiaries. (CMS Metric #23, OUD stratum; 2017–2021) • Inpatient stays for SUD per 1,000 Medicaid beneficiaries. (CMS Metric #24; 2017–2021) • Inpatient stays for OUD per 1,000 Medicaid beneficiaries. (CMS Metric #24, OUD stratum; 2017–2021)
Process Measures for Secondary Drivers
Improve adherence to treatment for OUD and other SUDs (Related to Goals 1–3)
• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22; 2019–2020) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2020) • Percentage of beneficiaries with SUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2021)* • Percentage of beneficiaries with OUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2021)* • Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period. (2017–2021)
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. (Related to Goals 2–4)
• Residential OUD discharges with MAT claim. (2017–2021) • Inpatient OUD discharges with MAT claim. (2017–2021) • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2021)
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD). (Related to Goals 2–4)
• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2019–2021) • Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2019–2021) • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2021) • Number of outpatient, intensive outpatient, and partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2021) **Note**: *Partial hospitalization in KS has same service code as inpatient*.
*Service Type Strata: early intervention, e.g., SBIRT (CMS Metric #7); outpatient services (CMS Metric #8); intensive outpatient and partial hospitalization (CMS Metric #9); residential and inpatient services (CMS Metric #10); withdrawal management (CMS Metric #11); medication-assisted treatment (MAT) (CMS Metric #12).

Table ES-4. Performance Measures for SUD Demonstration Goal 2 (Continued)
Process Measures for Secondary Drivers (Continued)
Ensure inpatient & residential providers improve care coordination & transition of care to the community. (Related to Goals 2–4)
• 30-Day Readmission for SUD treatment. (2017–2021) • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2021) • ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2021) • Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2021) • Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2021) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2020) • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2020) • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2020)
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2021) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2021)
*Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12).

Key Results and Conclusions

Two outcome measures indicated some improvement towards reducing preventable utilization of emergency departments for OUD and other SUD treatment. Additional improvements efforts may be needed to realize this goal. The main findings related to the outcome measures are summarized below:

- ED utilization rates for members with SUD and OUD diagnoses showed declining trendlines from 2017 to 2021.

Goal 3 (Primary Driver 3)

The performance measures assessed to evaluate Goal 3 are described in Table ES-5.

Table ES-5. Performance Measures for SUD Demonstration Goal 3
Outcome Measures for Goal 3 (Primary Driver 3)
• Opioid Drug Overdose Deaths. (CMS Metric #27, OUD Stratum; 2019–2021) • Use of Opioids at High Dosage in Persons without Cancer per 1,000 beneficiaries. (CMS Metric #18; 2019–2020) • Concurrent Use of Opioids and Benzodiazepines, per 1,000 beneficiaries. (CMS Metric #21; 2019–2020)
Process Measures for Secondary Drivers
Improve adherence to treatment for OUD and other SUDs (Related to Goals 1–3)
• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22; 2019–2020) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). 2017–2020) • Percentage of beneficiaries with SUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2021)* • Percentage of beneficiaries with OUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2021)* • Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period. (2017–2021)
*Service Type Strata: early intervention, e.g., SBIRT (CMS Metric #7); outpatient services (CMS Metric #8); intensive outpatient and partial hospitalization (CMS Metric #9); residential and inpatient services (CMS Metric #10); withdrawal management (CMS Metric #11); medication-assisted treatment (MAT) (CMS Metric #12).

Table ES-5. Performance Measures for SUD Demonstration Goal 3 (Continued)
Process Measures for Secondary Drivers (Continued)
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. (Related to Goals 2–4)
• Residential OUD discharges with MAT claim. (2017–2021) • Inpatient OUD discharges with MAT claim. (2017–2021) • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2021)
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD). (Related to Goals 2–4)
• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2019–2021) • Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2019–2021) • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2021) • Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2021) **Note**: *Partial hospitalization in KS has same service code as inpatient*.
Ensure inpatient & residential providers improve care coordination & transition of care to the community. (Related to Goals 2–4)
• 30-Day Readmission for SUD treatment. (2017–2021) • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2021) • ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2021) • Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2021) • Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2021) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2020) • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2020) • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2020)
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2021) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2021)
*Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12).

Key Results and Conclusions

The findings for three outcome measures indicated mixed results. The findings of one outcome measure indicated some improvement being made towards reduced use of opioid drugs—which in turn should reduce overdose deaths, particularly those due to opioids. However, the measure directly assessing the opioid drug overdose death rates did not indicate any improvement. The third measure's results are too preliminary to evaluate. The main findings related to the outcome measures are summarized below.

- Rates for Use of Opioids at High Dosage in Persons without Cancer per 1,000 Medicaid Beneficiaries decreased from 2019 to 2020, indicating some improvement is being made towards Goal 3.
- The Opioid Drug Overdose death rates increased slightly from 2019 to 2021, which does not indicate improvement.
- Coverage for Medication Assisted Treatment (MAT) drugs and biological products used for opioid use disorder (OUD) became effective October 1, 2020. Consequently, insufficient information was available on the concurrent use of opioids and benzodiazepines to draw conclusion.

Goal 4 (Primary Driver 4)

The performance measures assessed to evaluate Goal 4 are described in Table ES-6.

Table ES-6. Performance Measures for SUD Demonstration Goal 4
Outcome Measures for Goal 4 (Primary Driver 4)
• 30-Day Readmission for SUD treatment. (2017–2021) • 30-Day Readmission for SUD treatment (among discharges from a residential or inpatient facility for OUD treatment). (2017–2021)
Process Measures for Secondary Drivers
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. (Related to Goals 2–4)
• Residential OUD discharges with MAT claim. (2017–2021) • Inpatient OUD discharges with MAT claim. (2017–2021) • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2021)
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD). (Related to Goals 2–4)
• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2019–2021) • Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2019–2021) • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2021) • Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2021) **Note**: *Partial hospitalization in KS has same service code as inpatient*.
Ensure inpatient & residential providers improve care coordination & transition of care to the community. (Related to Goals 2–4)
• 30-Day Readmission for SUD treatment. (2017–2021) • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2021) • ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2021) • Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2021) • Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2021) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2020) • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2020) • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2020)
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2021) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2021)

Key Results and Conclusions

Two outcome measures indicated progress towards reducing preventable readmissions.

- 30-Day Readmission for SUD Treatment rates declined (improved) from 2017 to 2021, decreasing 1.7 percentage points per year, on average.
- Similarly, the rate of readmission for SUD treatment within 30 days of an OUD discharges had a declining trend, averaging 2.0 percentage points decreases from 2017 to 2021.

Goal 5 (Primary Driver 5)

The performance measures assessed to evaluate Goal 5 are described in Table ES-7.

Table ES-7. Performance Measures for SUD Demonstration Goal 5
Outcome Measures for Goal 5 (Primary Driver 5)
• Annual Dental Visits (ADV). (SUD stratum; 2016–2021) • Adults' Access to Preventive/Ambulatory Health Services (AAP). (Not included in interim evaluation) • Adolescent Well-Care Visits (AWC). (SUD stratum; 2016–2021) • Prenatal and Postpartum Care (PPC)–Timeliness of Prenatal Care. (SUD stratum; 2016–2021) • Prenatal and Postpartum Care (PPC)–Postpartum Care. (SUD stratum; 2017–2022)
Process Measures for Secondary Drivers
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2021) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2021)

Key Results and Conclusions

For evaluation of the primary driver for Goal 5, improvements in rates for 2016 to 2018 and 2019 to 2021 were compared between an intervention group (KanCare members, aged 16–75, who had a SUD diagnosis during the measurement year) and a comparison group (members, aged 16–75, who did not have a SUD diagnosis). The groups' 2016–2018 rates were not equal, so differences in 2019–2021 rates were expected. If the SUD demonstration had positive impact on the outcome measures, then the Intervention Group should show relatively more improvement between periods than the Comparison Group, or at least not decline as badly.

Comparisons of relative improvements for the four outcome measures did not yield supporting evidence that the SUD demonstration specifically is improving Goal 5. However, timeliness of prenatal care improved for both the SUD intervention group and non-SUD comparison group. The main findings related to the outcome measures are summarized below:

- The relative improvements in the percentage of members 16 to 20 years old who had a dental visit in the measurement year were not statistically significantly different between the intervention and comparison groups.
- The percentage of members 16 to 20 years old who had a well-care visit in the measurement year decreased for both the intervention and comparison group, but the decreases were less than 1 percentage point. The difference between the negative relative improvements of the two groups was not statistically significant.
- Timeliness of Prenatal Care rates improved for both the intervention group and comparison group. However, the relative improvements were not statistically significantly different. The rate increases between measurement periods is interpreted to be caused by a factor outside the SUD Demonstration, such as MCOs' performance improvement projects.

Outcome Evaluation – Opportunities for Improvement

- The rates for the Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days, Engagement within 34 days) were low. Rates improved in 2020; however, further improvement is needed.
- Further improvement is needed to reduce use of opioids at high doses among patients without cancer for their pain management treatments.
- Improvement in care coordination to assist members with SUD in receiving appropriate services for prevention and treatment of physical health conditions is needed.

Recommendations

- Strategies should be identified and implemented to help ensure members are aware of primary prevention and availability of treatment.
- Strategies should be identified and implemented to help ensure providers are aware of the SUD demonstration strategies and to identify and address associated provider training and skill building opportunities.
- Strategies should be identified and implemented to improve the use of early intervention services (SBIRT) and outpatient services among members with SUD. The improvement in the appropriate use of these levels of care will assist in reducing the burden on providers and facilities providing higher levels of care.
- Address barriers and challenges to engaging in the needed SUD treatment encountered by the members with SUD. Enhance action steps to improve availability of supportive services, such as peer support services, coordination of care for ensuring regular follow-up visits with SUD care providers, and provider trainings to assist members with SUD to engage in receiving needed SUD treatment.
- Review and improve the steps applied by the three MCOs to ensure all members with an SUD diagnosis receive an HRA and Needs Assessment, along with a PCSP and coordinated care, as appropriate. Application of the Service Coordination Strategy for members with an SUD diagnosis will help ensure coordination of care for co-occurring physical and mental health conditions.

Process Evaluation – Secondary Drivers

Secondary Driver 1 (Related to Goal 1)

Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment

The performance measure assessed to evaluate Secondary Driver 1 are described in Table ES-3.

Key Results and Conclusions

- Secondary Driver 1 was related to Goal 1. Since there were no significant changes in the percentage of members who received SBIRT services with a SUD service within 60 days, Secondary Driver 1 did not provide evidence supporting Goal 1's hypothesis that the demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs. Further improvements are needed.
- One of the performance measures for Secondary Driver 1 was assessed for the interim evaluation, the percentage of beneficiaries who received SBIRT services with evidence of SUD service within 60 days after SBIRT service. Changes were not seen between years and across five years.

Secondary Driver 2 (Related to Goals 1, 2, and 3)

Improve adherence to treatment for OUD and other SUDs

The performance measures for evaluating Secondary Driver 2 are listed in Tables ES-3, ES-4, and ES-5.

Key Results and Conclusions

- Secondary Driver 2 is related to Goals 1, 2 and 3. The evaluation found Secondary Driver 2 has contributed towards the progress towards achieving Goals 1, 2 and 3. Further improvements in this driver are needed to strengthen its contribution towards these goals.
- Secondary Driver 2 was examined by assessing five performance measures, including rates stratified by service type for two measures. The results for two out of five measures, and several service type strata, indicate that adherence to treatment for OUD and other SUDs is increasing.

- The rates of members with an OUD or other SUD receiving SUD treatment increased significantly in 2021. While almost all service type strata within these measures had some increase in 2021, most notable were increases in outpatient services and MAT. Members with an OUD diagnosis had higher rate increases for SUD treatment, overall and for several service type strata.
- Over the five-year period, the percentages of members with a SUD diagnosis who received peer support services remained low, between 5% and 6%. These results do not indicate adherence to treatment for OUD and other SUDs is improving.

Secondary Driver 3 (Related to Goals 2, 3, and 4)

Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment

The performance measures assessed to evaluate Secondary Driver 3 are described in Tables ES-3, ES-5, and ES-6.

Key Results and Conclusions

- Secondary Driver 3 is related to Goals 2, 3 and 4. Evaluation indicates this driver has contributed to progress towards achieving Goals 2, 3 and 4. Further improvements in in this driver are needed to strengthen its contribution towards these goals.
- The three performance measures used to assess Secondary Driver 3 indicated progress toward expanding access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment.
- The percentages of inpatient OUD discharges with a MAT claim were low from 2017 to 2020; however, the 2021 rate doubled compared to preceding years and showed a statistically significant change from 2020, indicating improvement in Secondary Driver 3.
- The percentages of members with OUD diagnosis who have a MAT claim for OUD increased statistically significantly from the previous year in 2020 and 2021 and increased over five years, averaging 1.67 percentage points per year, which indicates improvement in Secondary Driver 3.

Secondary Driver 4 (Related to Goals 2, 3, and 4)

Ensure access to treatment at all needed levels of care for SUD

The performance measures assessed to evaluate Secondary Driver 4 are described in Tables ES-4, ES-5, and ES-6. Since the severity of condition for which the member was treated and extenuating circumstances are unknown, interpreting rate increases or decreases as improvements must be done with caution.

Key Results and Conclusions

- Secondary Driver 4 is related to Goals 2, 3 and 4. Evaluation of this driver did not find enough evidence to conclude this driver is contributing to progress towards achieving Goals 2, 3 and 4. Further improvements in this driver are needed to establish its contribution towards these goals.
- The results of the four process measures did not provide strong enough evidence to indicate that an improvement is being made in ensuring access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD).
- The percentages of KanCare members with SUD diagnosis who were treated in an IMD for SUD during the measurement year changed little from 2019 to 2021. The decline in the percentage for 2020 corresponded with the onset of pandemic.

- The average length of stay for SUD treatment services within IMDs fluctuated between 2019 and 2021.
- The number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members was higher than average in 2021.
- The number of beneficiaries in outpatient, intensive outpatient, and partial hospitalization SUD treatment per 1,000 members with SUD diagnosis showed declines in 2019 and 2020. In 2021, the rate increased back to those seen in 2017 and 2018.

Secondary Driver 5 (Related to Goals 2, 3, and 4)

Ensure inpatient & residential providers improve care coordination & transition of care to the community

The performance measures assessed to evaluate Secondary Driver 5 are described in Tables ES-4, ES-5, and ES-6.

Key Results and Conclusions

- Secondary Driver 5 is related to Goals 2, 3 and 4. Based on results for the evaluation of this driver, it can be concluded that this driver has contributed towards the progress of achieving Goals 2, 3, and 4. Further improvements in this driver are needed to strengthen its contribution towards these goals.
- Secondary Driver 5 was assessed with nine performance measures, including four HEDIS measures. Of these nine measures, the results for five indicated that progress is being made towards ensuring inpatient and residential providers improve care coordination and the transition of care to the community. However, some results showed that further improvement may be needed.
- As mentioned in the description of Goal 1, the Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) rates for initiation of treatment within 14 days of SUD diagnosis had an increasing trend from 2017 to 2020, with an average increase of 3 percentage points per year. The Quality Compass ranking for the measure also improved. The 2019 and 2020 rates for continued engagement within 34 days of the initial treatment were greater than the 2017 and 2018 rates; the average increase was 0.5 percentage points per year. The rates for initiation within 14 days indicated improvement of Secondary Driver 5. The rates for engagement within 34 days provided weaker supporting evidence.
- A decreasing trend (improving 1.7 percentage points per year on average) was seen from 2017 to 2021 for the 30-day readmission for SUD treatment measure. These results are evidence that inpatient and residential providers are improving care coordination and transition of care to the community.
- As mentioned in the description of Goal 2, four service utilization measures were also examined for the evaluation of this driver. The two ED utilization measures indicated an improvement is being seen in Secondary Driver 5.

Secondary Driver 6 (Related to Goals 2, 3, 4, and 5)

Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy

The performance measures assessed to evaluate Secondary Driver 6 are described in Tables ES-4, ES-5, ES-6, and ES-7.

Key Results and Conclusions

- Secondary Driver 6 is related to Goals 2, 3, 4, and 5. Evidence that this driver contributes to the progress towards achieving Goals 2, 3, 4, and 5 was found by the two process measures reviewed. Further improvements in in this driver are needed to establish its contribution towards these goals.
- From 2019 to 2021, the percentages of Medicaid members with a SUD diagnosis who had an assigned MCO care manager were quite low. For physical and behavioral health services to be properly integrated and coordinated, MCOs care management teams should work with all members who have a SUD diagnosis and do not decline an offer for care management. The rate of increase from 2019 to 2021 (1.5 percentage points per year) indicates improvement in Secondary Driver 6 may be insufficient to obtain the Demonstration Goals.
- The percentages of Medicaid members with a SUD diagnosis who had an assigned MCO care manager and a patient centered service plan (PCSP) were also very low (about 2% in 2021). Percentages declined each year. These findings did not indicate that Secondary Driver 6 improved.

Outcome Evaluation – Opportunities for Improvement

- Improvements in the provision of early intervention (SBIRT) and care for SUD after provision of SBIRT services are needed.
- The rates for the Continuity of Pharmacotherapy for OUD (POD) measure were low and without change between years.
- Rates for both indicators of the Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA) were low (Within 7 days and Within 30 days).
- MAT rates remain low (16% and less), and continued improvement, building on 2021, is needed.
- Peer Support services were not provided to most of the members to assist them in continuing their SUD treatment.
- Improvements are needed for follow-up after ED visits for SUD treatment and after high-intensity care for SUD.
- The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days, Engagement within 34 days) were low. Rates improved in in 2020; however, further improvement is needed.
- A lack of standardization of the Health Screening Tool, Health Risk Assessment (HRA), Needs Assessment, and PCSP variable fields (in the datasets provided by the MCOs) created limitations in identifying members with SUD who received care coordination in line with the KanCare 2.0 program service coordination strategy.
- Low percentage of members with SUD who were assigned MCO care managers and who had a PCSP hindered progress towards multiple demonstration goals.

Recommendations

- Review and improve the efforts for providing support to the expansion SBIRT among physical health and behavioral health service providers to identify members at different risk levels for OUD or other SUDs and provide the appropriate level of referral to SUD providers.
- Improve availability and utilization of peer support services to assist members with SUD in adhering to their SUD treatment.
- Improve efforts, including care coordination, to assist members with SUD in scheduling and receiving follow-up visits at an appropriate level of care after ED visits for SUD treatment and after receipt of high-intensity care for SUD.

- Review and improve the steps applied by the three MCOs to ensure all members with SUD eligible to receive KanCare 2.0 Service Coordination Strategy (such as use of the Health Screening Tool) are identified and receive an HRA Needs Assessment, PCSP, and coordinated care through an assigned care manager, as appropriate, during the remaining years of the SUD demonstration. Application of the Service Coordination Strategy to members with SUD will assist in achieving performance goals.

Evaluation KanCare 2.0 Hypothesis 4

It was not clear how many IMDs are currently providing SUD treatment services to the KanCare members. The number of admissions with SUD treatment services in IMDs and average length of stay for SUD treatment services within IMDs did not show improvements from 2019 to 2021.

Opportunities for Improvement

- The information regarding the total number of IMDs in the State providing SUD services to KanCare members is not readily available.

Recommendations

- Insert and maintain an IMD designation flag in the provider tables of the Kansas Modular Medicaid System.
- Review and address the barriers encountered by the IMDs and the members in provision and utilization of SUD treatment services through IMDs.

Evaluation of Cost Measures

Based on paid claims, the SUD demonstration has maintained budget neutrality in the first three years. KFMC is working with KDADS to further identify the administrative costs that could be included in the evaluation of the cost measures. The findings of the evaluation will be included in the summative evaluation of the SUD demonstration.

Interpretations, Policy Implications, and Interactions with Other State Initiatives

KFMC will address the policy implications and interactions with other State initiatives in the summative SUD Demonstration evaluation. For this interim evaluation, the following interpretations could be made.

- It is not yet known how much the COVID-19 pandemic will influence the impact of the SUD Demonstration. It will take more years of data to assess the impact of the program, overall, outside of the context of the pandemic.
- It is difficult to interpret the interactions with other Medicaid and State programs due to the pandemic, as well. SUD Demonstration activities were drastically affected during the onset of the pandemic. The MCOs were instructed to pause many initiatives with members and providers in order to address the public health emergency.

Lessons Learned and Recommendations for State

Lessons learned and recommendations for other State Medicaid agencies will be further addressed in the summative SUD Demonstration evaluation report.

KanCare 2.0 Interim Evaluation Report
Evaluation of the State of Kansas Medicaid Section 1115(a) Demonstration – Substance Use Disorder
January 2019 – September 2021
Submission Date: October 17, 2022
Revision Date: June 14, 2023

General Background Information

On August 20, 2019, the Centers for Medicare & Medicaid Services (CMS) approved the KanCare 2.0 Section 1115 Substance Use Disorder (SUD) Demonstration Implementation Plan for the period of January 1, 2019, through December 31, 2023.[1] In accordance with CMS guidelines, the KanCare 2.0 SUD Demonstration evaluation design was submitted for CMS approval. The CMS review of the evaluation design was received April 2, 2020. An updated evaluation design as per CMS guidance and feedback was submitted, and it was approved by CMS on June 30, 2020.[2]

KFMC Health Improvement Partners (KFMC), under contract with the Kansas Department of Health and Environment (KDHE), Division of Health Care Finance (DHCF), serves as the External Quality Review Organization (EQRO) for KanCare. As the EQRO, KFMC is conducting the required SUD Demonstration evaluation and has prepared this interim evaluation report to reflect evaluation progress and presently available findings for January 2019 through December 31, 2021. An initial interim evaluation report was submitted on October 17, 2022. CMS's feedback and recommendations for revisions were received April 21, 2023.[3] This updated interim report incorporates modifications recommended by CMS.

The Implementation Plan outlines the State's strategy to provide a full continuum of services for SUD treatment to KanCare members. It is in alignment with the overall KanCare 2.0 goals that were designed to provide efficient and effective health care services and to ensure coordination of care and integration of physical health (PH), behavioral health (BH), and Home and Community Based Services (HCBS). KanCare 2.0 provides access to all critical levels of care for SUD and opioid use disorder (OUD).[1,3] The three KanCare managed care organizations (MCOs) provide access to a range of services across much of the American Society of Addiction Medicine (ASAM) levels of care. The spectrum of care—which includes outpatient treatment, peer recovery support, intensive outpatient services, medication-assisted treatment (MAT), intensive inpatient services, withdrawal management, and residential treatment—is provided to eligible Medicaid and CHIP recipients who need SUD or OUD treatment.[1] In addition, all members ages 19 through 64 have access to additional covered services, including SUD treatment services provided to individuals with SUD who are short-term residents in residential treatment facilities that meet the definition of an Institutions for Mental Disease (IMD).[4,5] Since 2020, KanCare covers methadone for MAT as required by the SUPPORT Act. Through the Implementation Plan, Kansas requires all inpatient residential treatment centers, including all those currently excluded as IMDs, to provide access to MAT through direct provision or by coordinated referral and treatment initiation to a MAT provider. This requirement was implemented through State policy instead of the initially planned licensing requirement.

KanCare 2.0 requires the provision of person-centered case management, as a one-on-one goal-directed service for individuals with a SUD, to assist in obtaining access to needed family, legal, medical, employment, educational, psychiatric, and other services. This service must be a part of the treatment plan developed and determined medically necessary by the MCO.[4]

KanCare 2.0 Section 1115 SUD Demonstration Goals

Kansas uses the 1115 demonstration authority to pursue the following goals to improve access to and quality of treatment for KanCare 2.0 program members with SUD:

1. Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.
2. Reduced utilization of emergency departments (EDs) and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.
3. Reduction in overdose deaths, particularly those due to opioids.
4. Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.
5. Improved access to care for physical health conditions among members with OUD or other SUDs.

Evaluation Question and Hypotheses

SUD Demonstration Driver Diagram

The driver diagram for the overall SUD demonstration (Figure 1) shows the relationship between the demonstration's purpose, the primary drivers that contribute directly to achieve the purpose, and the secondary drivers necessary to achieve the primary drivers.

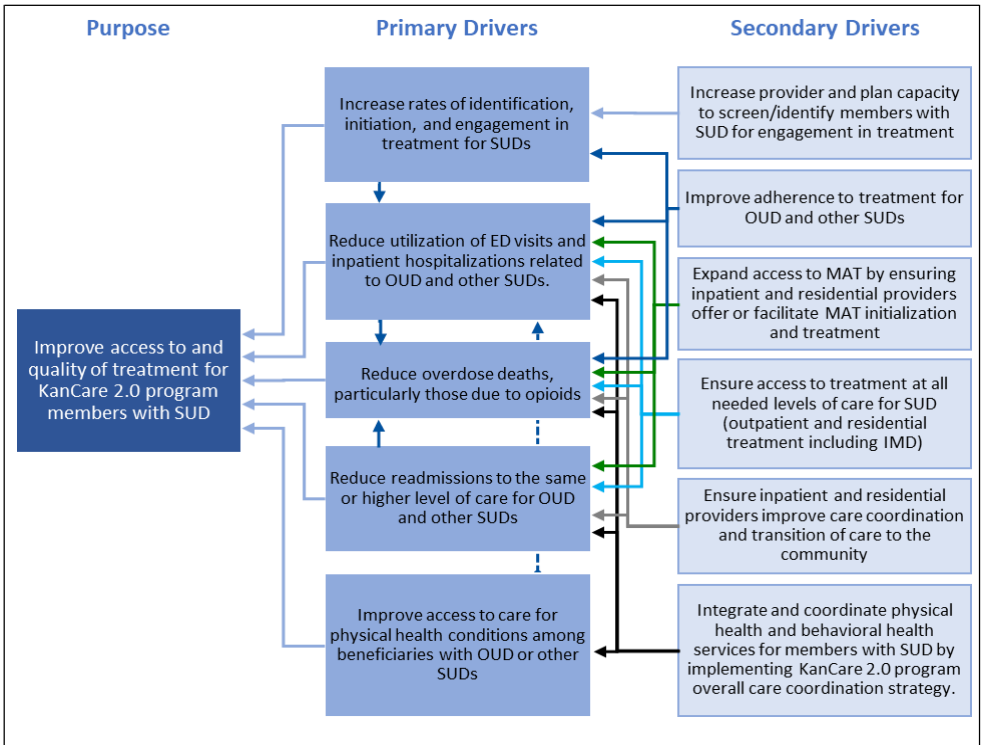

Figure 1. KanCare 2.0 Section 1115 SUD Demonstration Driver Diagram

SUD Demonstration Goals, Evaluation Questions, and Hypotheses

As the focus of the SUD Demonstration evaluation is to examine whether the demonstration achieved its goals, the following evaluation questions are designed in alignment with the five goals and related hypotheses (Table 1). This evaluation is in accordance with the CMS-approved "SUD, Section 1115 Demonstration Evaluation Design." (Attachment A)

Table 1. SUD Demonstration Goals, Evaluation Questions, and Hypotheses

	Goals	Evaluation Questions	Hypotheses
1.	Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.	Does the demonstration increase access to and utilization of SUD treatment services?	The demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.
2	Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.	Does the demonstration decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population?	The demonstration will decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population.
3.	Reductions in overdose deaths, particularly those due to opioids.	Are rates of opioid-related overdose deaths impacted by the demonstration?	The demonstration will decrease the rate of overdose deaths due to opioids.
4.	Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.	Do enrollees receiving SUD services experience reduction in readmissions to the same or higher level of care for OUD and other SUDs?	Among members receiving care for SUD, the demonstration will reduce readmissions to SUD treatment.
5.	Improved access to care for physical health conditions among members with OUD or other SUDs.	Do enrollees receiving SUD services experience improved access to care for physical health conditions?	The demonstration will increase the percentage of members with SUD who access care for physical health conditions.

KanCare 2.0 Demonstration Hypothesis 4

(Associated with SUD Demonstration Evaluation Design Question 1)

Within the CMS November 18, 2019, review of the KanCare 2.0 Section 1115 Demonstration Evaluation Design, CMS noted that removing payment barriers for services provided in IMDs for KanCare members was a strategy in both the KanCare 2.0 and SUD Demonstration.[6] To avoid duplicating evaluation activity, the KanCare 2.0 Hypothesis 4 and related question are addressed in the SUD Demonstration evaluation per CMS recommendation. (Table 2.)

Table 2. KanCare 2.0 Demonstration Hypothesis 4 and Evaluation Question

Hypothesis	Evaluation Question
Removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members will result in improved member access to substance use disorder (SUD) treatment services.	Did removing payment barriers for services provided in IMDs for KanCare members improve member access to SUD treatment services?

This evaluation question corresponds to the SUD Demonstration Evaluation Question 1, "Does the demonstration increase access to and utilization of SUD treatment services?"

Methodology

The evaluation methodology presented in the SUD Demonstration evaluation design document (Attachment 1) was designed to meet the standards of scientific rigor that will assist in obtaining statistically valid and reliable evaluation results. The focus of the interim evaluation is to examine progress towards the overall goal of helping Medicaid members with SUD to have improved access to and quality of treatment.

The following sections present an overview of methods and rationale for the demonstration evaluation, followed by sections detailing evaluation questions, evaluation hypotheses, and strategies for each goal of the Demonstration as well as KanCare 2.0 Program Hypothesis 4 and the overall cost evaluation.

Evaluation of the demonstration is primarily focused on KanCare 2.0 members with a SUD diagnosis ("study population"). In certain cases, members without a SUD diagnosis may access services (e.g., screenings or assessments) and will be included within the target population for certain measures or hypotheses. Due to state-wide implementation of the SUD Demonstration, the evaluation of overall strategies and hypotheses is hindered by the lack of true comparison groups, as all KanCare 2.0 members will be eligible for the same benefits. Target and comparison populations for each goal are described within that goal's evaluation methodology, discussed in the sections below. Several potential comparison populations have been identified for the final evaluation report that may provide additional perspective for certain measures or drivers, such as comparisons between rural and urban regions of the state (see Attachment 1).

The interrupted time series (ITS) evaluation design proposed in the SUD Demonstration Evaluation Design was not performed for the interim evaluation because the number of data points available for the analysis was insufficient. The ITS analysis will be performed for the summative evaluation to compare the selected performance outcomes in intervention and comparison groups from 2017 through 2023 (Pre-Intervention Period: 2017–2018; and Post-Intervention Period: 2019–2023). Appendix A, Table A1, provides a summary that lists each measure, the statistical tests and number of data points reported in the interim report, and the statistical tests and data points currently expected to be used for the summative report.

Where possible, measures were developed according to recognized measures from sources such as the CMS Metrics,[7] Adult Core Set,[8] and the Healthcare Effectiveness Data and Information Set® (HEDIS),[9] which are stewarded by the National Committee for Quality Assurance (NCQA) and endorsed by the National Quality Forum (NQF). It should be noted, some of the measures proposed in the evaluation design are not assessed in the interim evaluation. The assessment results for these measures will be included in the summative evaluation.

Following are the evaluation methods by goal.

a. Methodology for the Evaluation of Goal 1 – Identification, Initiation, and Engagement in Treatment

The SUD Demonstration Implementation Plan identifies the following strategies for reaching this goal:

- Support the expansion of *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) among

physical health and behavioral health service providers to identify members at different risk levels for OUD or other SUDs and provide the appropriate level of referral to SUD providers.
- Run a statewide media campaign to increase member and general population awareness of primary prevention and availability of treatment (utilizing funding from the federal State Opioid Response [SOR] grant).

Hypothesis

The demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.

Evaluation Design

In place of ITS analysis, the selected performance measures of the target population were examined across years (2017 to 2021, if available). Analysis of year-over-year changes and three- to five-year trend analysis were conducted.

Target Population

KanCare 2.0 members diagnosed with SUD or OUD.

Evaluation Period

January 1, 2019 – December 31, 2021.

Evaluation Measures

The outcome and process measures for evaluation progress toward Goal 1 stated in the Evaluation Design are shown in Table 3. One measure (the percentage of physical health and behavioral health service providers that billed SBIRT services) was not included in the interim evaluation; identifying individual providers within the provider types being licensed for SBIRT, as specified in state policy, was not possible with data made available.

Table 3. Performance Measures for SUD Demonstration Goal 1

Outcome Measure for Goal 1(Primary Driver 1)
• Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Initiation. (2017–2022)
• Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Engagement. (2017–2022)
Process Measures for Secondary Drivers
Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment (Relates to Goal 1)
• Percentage of physical health and behavioral health service providers that billed *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) services. (2017–2023)
• Receipt of care for SUD and/or OUD after SBIRT service. (2017–2023)
Improve adherence to treatment for OUD and other SUDs (Related to Goals 1–3)
• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22). (2017–2023)
• Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022)
• Percentage of beneficiaries with SUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)*
• Percentage of beneficiaries with OUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023).*
• Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period.
*Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12)

Data Sources

HEDIS data for the interim evaluation of the SUD Demonstration Goal 1 were obtained from the MCO. Encounter data and membership data were queried from the MMIS reporting warehouse.

Analytic Methods

Descriptive statistics are displayed in tables. Testing significance of changes between years used Fisher's exact or Pearson's chi-square tests with *p* less than 0.05 considered significant. A Mantel-Haenszel chi-square test was used to determine if the slopes of three- to five-year linear trend lines were statistically significantly different from horizontal.

b. Methodology for the Evaluation of Goal 2 – Emergency Department Visits and Inpatient Hospitalizations

The SUD Demonstration Implementation Plan identifies the following strategies for reaching this goal.

- Community Crisis Centers (CCCs) across the state to provide support and stabilization services for Kansans in crisis and engage with them in community-based services.
- Expand medication-assisted treatment (MAT).
- Expand the use of peer-supported rehabilitation and recovery services ("peer support services").
- Improve transitions between levels of care related to SUD treatment.

Hypothesis

The demonstration will decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population.

Evaluation Design

In place of ITS analysis, the selected performance measures of the target population were examined across years (2017 to 2021, if available). Analysis of year-over-year changes and three- to five-year trend analysis were conducted.

Target Population

KanCare 2.0 members diagnosed with SUD or OUD.

Evaluation Period

January 1, 2019 – December 31, 2021.

Evaluation Measures

The outcome and process measures for evaluation progress toward Goal 2 stated in the Evaluation Design are shown in Table 4. Each measure was analyzed for they measurement years in which data were available.

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Table 4. Performance Measures for SUD Demonstration Goal 2
Outcome Measures (Primary Drivers)
• ED utilization for SUD per 1,000 Medicaid beneficiaries. (CMS Metric #23; 2017–2023)
• ED utilization for OUD per 1,000 Medicaid beneficiaries. (CMS Metric #23, OUD stratum; 2017–2023)
• Inpatient stays for SUD per 1,000 Medicaid beneficiaries. (CMS Metric #24; 2017–2023)
• Inpatient stays for OUD per 1,000 Medicaid beneficiaries. (CMS Metric #24, OUD stratum; 2017–2023)
Process Measures (Secondary Drivers)
Improve adherence to treatment for OUD and other SUDs (Related to Goals 1–3)
• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22; 2017–2023)
• Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022)
• Percentage of beneficiaries with SUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)*
• Percentage of beneficiaries with OUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)*
• Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period. (2017–2023)
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. (Related to Goals 2–4)
• Residential OUD discharges with MAT claim. (2017–2023)
• Inpatient OUD discharges with MAT claim. (2017–2023)
• Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2023)
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD). (Related to Goals 2–4)
• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2017– 2023)
• Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2017–2023)
• Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2023)
• Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2023) **Note**: *Partial hospitalization in KS has same service code as inpatient*.
Ensure inpatient & residential providers improve care coordination & transition of care to the community. (Related to Goals 2–4)
• 30-Day Readmission for SUD treatment. (2017–2023)
• ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2023)
• ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2023)
• Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2023)
• Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2023)
• Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2022)
• Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2022)
• Follow-Up After High-Intensity Care for SUD (FUI). (2019–2022)
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2023)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2023)
*Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12).

Data Source

HEDIS data and care manager assignments for the interim evaluation of the SUD Demonstration Goal 2 were obtained from the MCO. Encounter data and membership data were queried from the MMIS reporting warehouse.

Analytic Methods

Descriptive statistics are displayed in tables. Testing significance of changes between years used Fisher's exact or Pearson's chi-square tests with *p* less than 0.05 considered significant. A Mantel-Haenszel chi-square test was used to determine if the slopes of three- to five-year linear trend lines were statistically significantly different from horizontal.

c. Methodology for the Evaluation of Goal 3 – Overdose Deaths Due to Opioids

The SUD Demonstration Implementation Plan identifies the following strategies to contribute towards reaching this goal.

- Expansion of medication-assisted treatment (MAT).
- Care coordination requirements by the MCOs to improve transitions to the community and participation in community-based recovery services.

In addition to the above-mentioned secondary drivers and strategies, the following secondary drivers and their related strategies (described for Goal 2) will also contribute toward achieving Goal 3.

- Ensure access to services at all needed levels of care for SUD, including outpatient treatment (group, individual, and/or family counseling, community psychiatric support, crisis intervention), residential treatment (including coverage of SUD treatment in IMDs), and peer support services (Secondary Driver 3).
- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy (Secondary Driver 5).

Evaluation Design

In place of ITS analysis, the selected performance measures of the target population were examined across years (2017 to 2021, if available). Analysis of year-over-year changes and three- to five-year trend analysis were conducted.

Target Population

KanCare 2.0 members diagnosed with SUD, particularly those due to opioids.

Evaluation Period

January 1, 2019 – December 31, 2021.

Evaluation Measures

The outcome and process measures for evaluation progress toward Goal 3 stated in the Evaluation Design are shown in Table 5. Each measure was analyzed for they measurement years in which data were available.

Table 5. Performance Measures for SUD Demonstration Goal 3
Outcome Measures (Primary Drivers)
• Opioid Drug Overdose Deaths. (CMS Metric #27, OUD Stratum; 2019–2022) • Use of Opioids at High Dosage in Persons without Cancer per 1,000 beneficiaries. (CMS Metric #18; 2017–2023) • Concurrent Use of Opioids and Benzodiazepines, per 1,000 beneficiaries. (CMS Metric #21; 2018–2023)
Process Measures (Secondary Drivers)
Improve adherence to treatment for OUD and other SUDs (Related to Goals 1–3)
• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22; 2017–2023) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022) • Percentage of beneficiaries with SUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)* • Percentage of beneficiaries with OUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)* • Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period. (2017–2023)
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. (Related to Goals 2–4)
• Residential OUD discharges with MAT claim. (2017–2023) • Inpatient OUD discharges with MAT claim. (2017–2023) • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2023)
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD). (Related to Goals 2–4)
• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2017–2023) • Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2017–2023) • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2023) • Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2023) **Note**: *Partial hospitalization in KS has same service code as inpatient*.
Ensure inpatient & residential providers improve care coordination & transition of care to the community. (Related to Goals 2–4)
• 30-Day Readmission for SUD treatment. (2017–2023) • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2023) • ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2023) • Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2023) • Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2023) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2022) • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2022) • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2022)
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2023) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2023)
*Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12).

Data Sources

HEDIS data and care manager assignments for the interim evaluation of the SUD Demonstration Goal 2 were obtained from the MCO. Claims data and membership data were queried from the MMIS reporting

warehouse. Data for the three measures for evaluating the primary driver were provided by the Kansas Department on Aging and Disability Services (KDADS).

Analytic Methods

Descriptive statistics are displayed in tables. Testing significance of changes between years used Fisher's exact or Pearson's chi-square tests with *p* less than 0.05 considered significant. A Mantel-Haenszel chi-square test was used to determine if the slopes of three- to five-year linear trend lines were statistically significantly different from horizontal.

d. Methodology for the Evaluation of Goal 4 – Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs

Two strategies contributing to the primary and secondary drivers for Goal 4 will be implemented over the demonstration period. The strategies include:

- To ensure admission of members with SUD to the appropriate level of care, documentation of an assessment which follows ASAM criteria will be required.
  - Licensing standards for all providers across the network will be aligned with the ASAM criteria.
- Care coordination requirements will aim to decrease readmission to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.

The two strategies described here will contribute to the following two secondary drivers, which in turn will lead to the reduced readmissions to the same or higher level of care for OUD and other SUDs (primary driver for Goal 4):

- Ensure access to services at all needed levels of care for SUD, including outpatient treatment (group, individual, and/or family counseling, community psychiatric support, crisis intervention). residential treatment (including coverage of SUD treatment in IMDs), and peer support services.
- Ensure inpatient and residential providers improve care coordination and transition of care to the community.

In addition to the above-mentioned secondary drivers and strategies, the following secondary drivers and their related strategies (described for Goal 2) will also contribute in achieving Goal 4.

- Expand access to MAT by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment for those who meet the need criteria and choose treatment.
- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy.

Evaluation Design

In place of ITS analysis, the selected performance measures of the target population were examined across years (2017 to 2021, if available). Analysis of year-over-year changes and three- to five-year trend analysis were conducted.

Target Population

KanCare 2.0 members diagnosed with SUD or OUD.

Evaluation Period

January 1, 2019 – December 31, 2021.

Evaluation Measures

The outcome and process measures for evaluation progress toward Goal 4 stated in the Evaluation Design are shown in Table 6. Each measure was analyzed for they measurement years in which data were available.

Table 6. Performance Measures for SUD Demonstration Goal 4
Outcome Measures (Primary Drivers)
• 30-Day Readmission for SUD treatment. (2017–2023) • 30-Day Readmission for SUD treatment (among discharges from a residential or inpatient facility for OUD treatment). (2017–2023)
Process Measures (Secondary Drivers)
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. (Related to Goals 2–4)
• Residential OUD discharges with MAT claim. (2017–2023) • Inpatient OUD discharges with MAT claim. (2017–2023) • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2023)
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD). (Related to Goals 2–4)
• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2017–2023) • Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2017–2023) • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2023) • Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2023) **Note**: *Partial hospitalization in KS has same service code as inpatient*.
Ensure inpatient & residential providers improve care coordination & transition of care to the community. (Related to Goals 2–4)
• 30-Day Readmission for SUD treatment. (2017–2023) • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2023) • ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2023) • Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2023) • Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2023) • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2022) • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2022) • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2022)
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2023) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2023)

Data Sources

HEDIS data and care manager assignments for the interim evaluation of the SUD Demonstration Goal 2 were obtained from the MCO. Claims data and membership data were queried from the MMIS reporting warehouse.

Analytic Methods

Descriptive statistics are displayed in tables. Testing significance of changes between years used Fisher's exact or Pearson's chi-square tests with p less than 0.05 considered significant. A Mantel-Haenszel chi-square test was used to determine if the slopes of three- to five-year linear trend lines were statistically significantly different from horizontal.

e. Methodology for the Evaluation of Goal 5 – Access Care for Physical Health Conditions

The **strategy** contributing to the primary and secondary drivers for Goal 5 will be implemented over the demonstration period. The strategy includes:

- KanCare 2.0 contracts with MCOs will focus on the integration of behavioral health and physical health among members with SUDs.
    - Care coordination includes health screening, health risk assessment, needs assessment, and development and implementation of service/treatment plan or person-centered service plan (PCSP).

The strategy described here will contribute to the following secondary driver, which in turn will lead to improved access to care for physical health conditions among members with OUD or other SUDs (primary driver for Goal 5):

- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy.

Evaluation Design

In place of ITS analysis, the selected performance measures of the target population were examined across years (2017 to 2021, if available). Analysis of year-over-year changes and five-year trend analysis were conducted.

Since the access to services was impacted by the pandemic, an alternate approach was added to the interim evaluation of the KanCare 2.0 SUD Demonstration. Relative improvements in measurement rates from a pre-KanCare 2.0 baseline period (2016–2018) to a KanCare 2.0 remeasurement period (2019–2021) were compared. Under the assumption that the pandemic and other external influences would equally impact rates for intervention and comparison groups, greater relative improvements for the intervention group than for the comparison group would support the assertion that the SUD Demonstration was effective.

Target Population

KanCare 2.0 members diagnosed with SUD or OUD.

For evaluation of the primary driver for Goal 5, comparisons were made between two groups:

- **Intervention Group:** KanCare members, aged 16–75, who had a SUD diagnosis during the measurement year.
- **Comparison Group:** KanCare members, aged 16–75, who did not have a SUD diagnosis during the measurement year

Evaluation Period

January 1, 2019 – December 31, 2021.

Evaluation Measures

The outcome and process measures for evaluation progress toward Goal 5 stated in the Evaluation Design are shown in Table 7. One measure (Adults' Access to Preventive/Ambulatory Health Services) was excluded from analysis when the Intervention Group and Comparison Groups were found to be too different for the proposed analysis. The SUD population was partially identified through ambulatory health service claims, a numerator criterion for the measure, which resulted in a baseline rate (94%) for the intervention group that was significantly greater than the baseline rate (86%) for the comparison group.

Table 7. Performance Measures for SUD Demonstration Goal 5
Outcome Measures for Goal 1(Primary Driver 1)
• Annual Dental Visits (ADV). (SUD stratum; 2017–2022) • Adults' Access to Preventive/Ambulatory Health Services (AAP). (SUD stratum; 2017–2022) • Adolescent Well-Care Visits (AWC). (SUD stratum; 2017– 2022) • Prenatal and Postpartum Care (PPC)–Timeliness of Prenatal Care. (SUD stratum; 2017–2022) • Prenatal and Postpartum Care (PPC)–Postpartum Care. (SUD stratum; 2017–2022)
Process Measures for Secondary Drivers
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy. (Related to Goals 2–5)
• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2023) • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2023)

Data Sources

HEDIS data for 2019 and 2020 and care manager assignments for the interim evaluation of the SUD Demonstration Goal 5 were obtained from the MCO. HEDIS rates measuring the primary driver were calculated from encounter and membership data queried from the State's MMIS reporting warehouse.

Analytic Methods

For measuring the performance of the secondary drivers, statistics are displayed in tables. Testing significance of changes between years used Fisher's exact or Pearson's chi-square tests with p less than 0.05 considered significant. A Mantel-Haenszel chi-square test was used to determine if the slopes of three-year linear trend lines were statistically significantly different from horizontal.

The following outcome measures were assessed to examine the primary driver for Goal 5:

- Annual Dental Visit (HEDIS)
- Adolescent Well-Care Visits (HEDIS)
- Prenatal and Postpartum Care (PPC)

Evaluation Measures

The following outcome measures were assessed to examine the evaluation question:

- Annual Dental Visit (HEDIS)
- Adolescent Well-Care Visits (HEDIS)
- Prenatal and Postpartum Care (PPC)

The following analytical steps are applied to examine the outcome measures for the evaluation of the KanCare 2.0 SUD Demonstration:

1) KanCare 2.0 members constituting the target and comparison populations (intervention and comparison groups) were identified from MMIS data files. SUD members were identified using ICD-10-CM diagnosis codes listed in HEDIS value sets Alcohol Abuse and Dependence, Opioid Abuse and Dependence, and Other Abuse and Dependence. Age was calculated as of December 31 of the measurement year.
2) Demographic characteristics of the members in the intervention and comparison groups were examined for homogeneity. Ages were restricted to 16–75 to improve homogeneity.
3) MMIS encounter records related to the outcome measures for the intervention and comparison groups was reviewed for missing values, inconsistent patterns, and outliers.

4) Outcome measures rates were calculated from encounter data for measurement years (MY) 2016–2021 and MCO HEDIS datafiles for MY 2019–2020.
5) For HEDIS measures, MY 2019–2020 rates calculated by KFMC were compared to rates calculate from member-level data submitted by the MCOs. To check the adequacy of the encounter- based rates to measure improvement, the differences between the groups' rates calculated from encounters were compared to the differences in groups' rates calculated from the MCOs' data.
6) Statistical testing for statistically significant differences in rates between baseline (2016 to 2018) and remeasurement (2019 to 2021) periods was conducted for Intervention Group and Comparison Group.
7) Relative improvement from baseline to remeasurement was calculated for the Intervention Group and Comparison Group. A chi-square test for equality of relative improvements of the was conducted with *p* less than 0.05 indicating statistical significance.

Because member-level HEDIS data from the MCOs were available only for measurement years 2019 and 2020, HEDIS rates were calculated from encounter data. If technical specifications changed between measurement years that required a break in trending, then the more current version of the specifications were applied to the earlier measurement years to allow trending. Rates calculated from encounter records are not to be considered HEDIS Health Plan rates; calculation of HEDIS rates by the MCOs incorporates supplemental data not available through encounters, such as data extracted from medical records and claims from their other lines of business. The HEDIS rates calculated from the encounter data are Uncertified, Unaudited HEDIS rates. In addition to the three HEDIS rates listed above, 2016–2021 rates were calculated for Adults' Access to Preventive/Ambulatory Health Services (AAP); however, the difference in rates between the Intervention Group and Comparison Group was deemed too large for the analysis (since the SUD population is identified though claims, their AAP rate was very high; members abusing substances and not receiving health services were in the comparison group). Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET) and Follow-Up After ED Visit for Alcohol and Other Drug Abuse/Dependence (FUA) were excluded from the analysis because they were not applicable to Comparison Group—only members with a SUD diagnosis are included in the measures' denominators.

Reduction in the failure rate (RFR) was used for relative improvement. RFR is the amount of improvement relative to the amount of potential improvement. The formula is:

RFR = (Remeasurement Rate minus Initial Rate)/(Goal minus Initial Rate).

For HEDIS rates for which a rate increase is an improvement, the goal was set to 100%.

The tests for equality of relative improvement between the Intervention Group and Comparison Group followed these steps:

1. Comparison Group's RFR was calculated.
2. The rate the Intervention Group would have had for 2019–2020 if the RFR from the group's 2016–2018 to the projected rate equaled Comparison Group's RFR (a.k.a., the *projected rate*) was calculated. The denominator of the projected rate was set equal to the denominator of 2016–2018 rate for the Intervention Group.
3. The statistical significance of the difference between the projected rate and the 2019–2021 rate for the Intervention Group was tested using a Pearson's chi-square test.

f. Methodology for the Evaluation of KanCare 2.0 Hypothesis 4

As a strategy, the Kansas Medicaid IMD Exclusion was removed, allowing IMDs to bill KanCare for SUD treatment services, with the expectation that access to SUD services will increase for members with behavioral health conditions.

KanCare 2.0 Hypothesis 4

Removing payment barriers for services provided in IMDs for KanCare members will result in improved member access to SUD treatment services.

Evaluation Question

Did removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members improve member access to substance use disorder (SUD) treatment services?

This question corresponds to the SUD Demonstration Evaluation Question 1, "Does the demonstration increase access to and utilization of SUD treatment services?"

Evaluation Design

Non-experimental methods (descriptive data) were used for assessing the evaluation question. Pre-demonstration encounter data were not available due to KanCare payments to IMDs for SUD treatment services began with this SUD demonstration

Target Population

The evaluation for this hypothesis will focus on increasing the availability of IMD facilities providing SUD treatment services over the five-year period.

Evaluation Period

January 1, 2019 – December 31, 2021.

Evaluation Measures

The outcome and process measures for addressing the evaluation question are stated in Table 8. Each measure was analyzed for the measurement years in which data were available.

Table 8. Performance Measures for KanCare 2.0 Hypothesis 4

Measure Description
• Number of IMDs providing SUD services
• Number of geographic locations of IMDs providing SUD services (by region/county)
• Number of admissions with SUD treatment services in IMDs
• Average length of stay for SUD treatment services within IMDs

g. Methodology for the Evaluation of Cross-Cutting Cost Measures

The investigation of costs for the KanCare 2.0 SUD Demonstration is a separate but cross-cutting element of the demonstration evaluation. Cost studies investigate both granular (i.e., specific treatment costs) and macro aspects of the KanCare program unique to the SUD demonstration. The SUD demonstration is designed to maintain budget neutrality while improving the effectiveness of services delivered to the Medicaid population. The intent of cost studies is not to identify statistically significant increases or decreases in program costs but to understand how spending within different

categories may contribute to enhanced program effectiveness. This is, in large part, due to how Medicaid managed care capitation payments obscure true administrative spending versus a fee-for-service paradigm.

Demonstration Goal for Costs of SUD

Improved impact of the KanCare 2.0 program via provision of a full continuum of services for SUD treatment to members.

Evaluation Question

Does the SUD demonstration maintain or decrease total KanCare 2.0 SUD expenditures?

Evaluation Hypothesis

The SUD demonstration will maintain or decrease total KanCare 2.0 SUD expenditures.

Demonstration Strategy

Each of the strategies within the Evaluation Design Methodology, which support the primary and secondary drivers, are also utilized in the investigation of program costs. The outcomes of these strategies are anticipated to contribute to enhanced program efficiency and effectiveness.

Enhancements to efficiency may include reductions to admissions (or readmissions) and other burdens related to treatment of preventable or medically inappropriate encounters as well as any other outcomes that reduce unnecessary utilization or duplication of efforts. This may also shift costs associated with the transition from formal treatment to community recovery services.

Evaluation Measures

The SUD demonstration cost measures, listed in Table 9, are stratified into three interrelated cost categories, each expressed in terms of dollars per member per month ($PMPM):

- **Type of Care Cost Drivers**: treatment costs for members with SUD diagnosis, stratified by types of care using claims data
- **SUD Cost Drivers**: treatment costs for members, stratified by services rendered within IMDs and other SUD-related costs for members with and without SUD diagnosis
- **Total KanCare 2.0 SUD Demonstration Costs**: treatment costs from the cost drivers listed above as well as administrative costs associated with the demonstration

The evaluation measures for the type of care and SUD cost drivers were derived from encounters for paid claims. Administrative data for the Total KanCare 2.0 SUD Demonstration Costs measures were not available. Administrative costs relate to regular business operations, including office buildings, utilities, equipment, supplies, salaries, and benefits. These types of costs for the State are not generally allocated by specific program, such as the SUD Demonstration program. KFMC continues discussions with KDADS to determine a potential method to identify administrative costs for the cost measures.

Table 9. SUD Demonstration Cost Measures
Type of Care Cost Drivers
• ED Outpatient SUD spending during the measurement period. Expressed in dollars per member per month ($PMPM). • Non-ED Outpatient SUD spending during the measurement period. ($PMPM) • Inpatient and residential SUD spending during the measurement period. ($PMPM) • Pharmacy SUD spending during the measurement period. ($PMPM) • Total KanCare 2.0 SUD treatment spending on beneficiaries with SUD diagnosis during the measurement period. ($PMPM)
SUD Cost Drivers
• SUD spending on inpatient/residential services and pharmaceuticals within IMDs during the measurement period. Expressed in dollars per member per month ($PMPM). [CMS Metric #31] • SUD spending on services other than within IMDs during the measurement period. ($PMPM) [CMS Metric #30] • SUD spending on SBIRT services for beneficiaries without SUD diagnosis during the measurement period. ($PMPM) • SUD spending on assessment services for beneficiaries without SUD diagnosis during the measurement period. ($PMPM) • Total KanCare 2.0 SUD treatment spending during the measurement period. ($PMPM)
Total KanCare 2.0 SUD Demonstration Costs
• Total administrative costs related to the KanCare 2.0 SUD demonstration. Expressed in dollars per member per month ($PMPM). • Total administrative and SUD service costs related to the KanCare 2.0 SUD demonstration. ($PMPM) • Total Federal costs related to the KanCare 2.0 SUD demonstration. ($PMPM)

Data Sources

MCO payment totals and membership counts were queried from databases from the State's MMIS reporting warehouse. Amounts paid by primary payors and Medicare were not reported in the cost analysis because those amounts are known to be incompletely populated in the encounter data.

Methodological Limitations

The interim evaluation has a strong reliance upon year-over-year comparisons or comparisons to baselines that may not imply causality due to a specific intervention. Further, the reliance upon non-experimental methods for KanCare 2.0 Hypothesis 4 will inhibit interpretations and conclusions from investigation in changes to Kansas' IMDs. Lastly, the Kansas Medicaid managed care model hinders the ability to investigate costs with the same precision that would be possible in fee-for-service models due to capitation arrangements. Every attempt to ensure quality data and analysis were made for observed limitations to evaluation design.

As noted previously, the lack of true comparison groups due to state-wide implementation was a major limitation in evaluating the SUD Demonstration.

Methodological issues encountered include:

- Spillover effects – The percentage of beneficiaries with SUD diagnosis who used SUD treatment services, for example, is subject to spill-over effects. Ensuring access to the appropriate levels of treatment may lead to increase in inpatient and residential treatment. Interventions promoting preventive medicine and early intervention aim to reduce usage of higher levels of care.
- Multiple treatment threats due to other interventions – The target population is the same, KanCare members with SUD or OUD, for Goals 1–5. These members are also included in the target populations for the KanCare 2.0 Demonstration strategies and MCO performance improvement projects.
- Effect of confounding variables – The COVID-19 public health emergency was a very strong confounding variable that impacted almost all aspects of the evaluation.
    - Stay-at-home orders and the increasing care needs of those infected reduced access to care.

  - Social isolation, loss of jobs, and deaths of family or friends can lead to increased alcohol or drug use.
  - As an emergency measure, disenrollment from KanCare was suspended for many members who would otherwise have become ineligible for benefits (e.g., CHIP members turning 19 years old and 60 days after delivery for women receiving benefits due to pregnancy). Consequently, the number of KanCare members increased in 2020 and 2021 (impacting utilization rates) and the homogeneity of the population changed (impacting statewide outcome measures).
- Inadequate statistical power – Receipt of care for SUD after SBIRT Service had a denominator less than 75.
- Statistical testing results on measures with large denominators frequently produced *p*-values less than 0.001. If confounding variables were known, test results may not have been meaningful for evaluation of the hypotheses.
- Data unavailability – Data for identifying IMDs is not contained within MMIS; a current list of IMDs was provided by the State, but the list did not contain changes from prior years. Data for cost analysis was incomplete or not available.

The use of administrative claims and encounters data for performance measures can be a limitation when used to determine changes in access to services, quality of care, and health outcomes. However, many of the performance measures are validated and stewarded by nationally recognized bodies such as NCQA and widely used for these purposes. While administrative data may identify key cases and statistical trends in performance, these are usually limited in providing detailed health and health behavior information, thus making it difficult to obtain information on possible covariates influencing performance. The use of administrative accounting data for evaluation of costs may also present a challenge in reconciling costs unique to the demonstration across different accounting platforms and practices.

Claim payments by primary payors and Medicare were incompletely populated on the encounter records. This limited cost analysis from encounter data to amounts paid by the MCOs. Claims paid completely by other payors, or counted toward member spend down amounts, are referred to as *zero dollar paid claims*. Depending on the claim type and MCO, the MCO-payment status may be paid or denied, which makes identification of services or diagnoses from paid claims inconsistent.

Data lag also causes a challenge in measuring and reporting change in a timely manner. Analysis from encounter data were limited to dates of service occurring in 2017 through 2021 and further limited to encounters received into the State's system within 3 months of the measurement year. The latest HEDIS data from the MCOs available for analysis was measurement year 2020. Additional challenges specific to cost data are lags related to both the resolution and reconciliation of claims but also in availability of administrative data due to fiscal timeframes and policies.

A lack of standardization of the Health Screening Tool, Health Risk Assessment (HRA), needs assessment, and PCSP variable fields, in the datasets provided by the MCOs, created limitations in identifying members with SUD who receive the KanCare 2.0 program service coordination strategy.

Results

The secondary drivers, which are process measures, frequently apply to more than one of the demonstration's goals. The first part of this section provides the analytical results of the secondary drivers and an interpretation applicable to the drivers' goals. Each of the primary drivers are basically the demonstration goals. The analytical results and interpretation of the outcome measures assessing the primary drivers will follow discussion of the secondary drivers.

All results should be interpreted with caution as the evaluation period corresponded with the onset and continuation of the COVID-19 pandemic. The data and analytical results for 2022 and 2023 will better assess progress towards the demonstration goals.

Process Evaluation – Secondary Drivers

Secondary Driver 1 (Related to Goal 1)

Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment

One of the performance measures for Secondary Driver 1 was assessed for the interim evaluation, the percentage of beneficiaries who received SBIRT services with evidence of SUD service within 60 days after SBIRT service. Changes between years and across five years were not statistically significant (Table 10). These results did not indicate that provider and plan capacity to screen and identify members with SUD for engagement in treatment is being increased, and further improvements are needed.

Table 10. Measurements of Secondary Driver 1

Secondary Driver 1 (*Related to Goal 1*): *Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
Receipt of care for SUD after SBIRT Service Percentage of beneficiaries who received SBIRT services with evidence of SUD service within 60 days after SBIRT service	2017	20	46	43%		*p*=.12
	2018	29	72	40%	*p*=.73	
	2019	22	47	47%	*p*=.48	
	2020	22	74	30%	*p*=.06	
	2021	22	65	34%	*p*=.60	

The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate. Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 5-year trend line is statistically significantly different from horizontal.

Conclusions Related to Goals

Goal 1 – Identification, Initiation, and Engagement in Treatment for OUD and other SUDs

Since there were no significant changes in the percentage of members who received SBIRT services with a SUD service within 60 days, Secondary Driver 1 did not provide evidence supporting Goal 1's hypothesis that the demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.

Secondary Driver 2 (Related to Goals 1, 2, and 3)

Improve adherence to treatment for OUD and other SUDs

The Secondary Driver 2 was examined by assessing five performance measures, including stratified rates for service types for two measures (Tables 11–14). The results for two out of five measures, and several service type strata, indicate that adherence to treatment for OUD and other SUDs is increasing. Results are summarized below. Based on these results, it can be concluded that some evidence is being seen towards improvement of Secondary Goal 2, however, further improvement in needed.

Table 11. Measurements of Secondary Driver 2 – HEDIS

Secondary Driver 2 (*Related to Goals 1, 2, and 3*): *Improve adherence to treatment for OUD and other SUDs*

Measure		Year	Numerator	Denominator	Rate	Rank	*p*-value	Trend
Continuity of Pharmacotherapy for OUD (POD)		2019	55	183	30.05			
		2020	68	218	31.19	≥50th	*p*>.99	
Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA)	**– Within 7 Days**	2017	160	1,039	15.40	>66.67th		*p*=.88
		2018	234	1,499	15.61	>66.67th	*p*=.89	
		2019	211	1,462	14.43	≥50th	*p*=.37	
		2020	217	1,393	15.58	≥50th	*p*=.39	
	– Within 30 Days	2017	233	1,039	22.43	>66.67th		*p*=.31
		2018	344	1,499	22.95	>66.67th	*p*=.76	
		2019	312	1,462	21.34	≥50th	*p*=.29	
		2020	297	1,393	21.32	≥50th	*p*>.99	

Rankings are based on Quality Compass national percentile rankings.
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 4-year trend line is statistically significantly different from horizontal, and if significant, the slope measured in percentage points per year (pp/y).

The 2019 and 2020 rates for the HEDIS measure Continuity of Pharmacotherapy for OUD (POD) were low, about 31%, with no statistically significant change. Therefore, almost 70% of members with an OUD prescription had more than a seven-day gap in a 180-day period. Also, the rates follow up within 7 days and follow up within 30 days indicators of the HEDIS measure Follow-Up After ED Visit for Alcohol and Other Drug Abuse/Dependence (FUA) were low from 2017 to 2020, and no statistically significant changes were seen. Less than one-fourth of members who had an Emergency Department visit for alcohol or other drug use were seen by any practitioner within 30 days, and even fewer within 7 days. These results do not indicate adherence to treatment for OUD and other SUDs is increasing.

Similar results were seen for the two measures examining SUD treatment among members with a SUD diagnosis and among beneficiaries with an OUD diagnosis. The increases for the overall rates and many of the service type strata indicate adherence to treatment for OUD and other SUDs is being increased.

- The percentages of members with a SUD diagnosis who received SUD treatment (overall measure) was generally flat until 2021, when the rate increased 6.39 percentage points (pp) to 50%. This increase was primarily due to increases in outpatient services (4.37 pp) and residential/inpatient services (2.5 pp). The remaining service types all had small improvements in 2021. Of note, MAT services for members with a SUD diagnosis have had statistically significant increases each year.
- Increases in SUD treatment for members with an OUD diagnosis were higher than the increases seen in the population diagnosed with any SUD. In 2021, there was a 6.92 pp increase, to 63%, of members with an OUD diagnosis who received SUD treatment, including a 5.55 pp increase in outpatient services, a 3.2 pp increase in residential/inpatient services, and a 3.86 pp increase in MAT services.
- In absence of the information on the root causes for the changes seen, a definitive conclusion could not be made whether a positive or negative result is seen for the receipt of the following two service types.
    - The percentages of beneficiaries with a SUD diagnosis who received intensive outpatient/partial hospitalization for 2019 to 2021 have been below pre-demonstration levels. It should be noted, these decreases could be considered good if these are due to effective use of lower levels of care. However, if the decreasing rates are due to fewer members receiving this level of care who need it, then they could be considered moving in wrong direction.

- The increases in members with an OUD or other SUD diagnosis who received residential/inpatient services could be considered good if it is due to more members needing this level of care and receiving it. However, if increases are due to ineffective use of lower levels of care, this could be considered moving in wrong direction.

Table 12. Measurements of Secondary Driver 2 – Receipt of Treatment for SUD

Secondary Driver 2 (*Related to Goal 1, Goal 2, and Goal 3*): *Improve adherence to treatment for OUD and other SUDs*

Type of SUD treatment used	Year	Numerator	Denominator	Rate	*p*-value	Trend
Overall percentage of beneficiaries with a SUD diagnosis who received SUD Treatment	2017	9,774	22,119	44.19%		1.18
	2018	10,236	23,378	43.78%	*p*=.39	
	2019	10,369	23,751	43.66%	*p*=.78	
	2020	9,927	22,703	43.73%	*p*=.88	
	2021	11,414	22,774	50.12%	*p*<.001	
Stratification by Service Type (members may be counted for each service type)						
Percentage of beneficiaries with a SUD diagnosis who received early intervention (e.g., SBIRT)	2017	18	22,119	0.08%		–0.01
	2018	15	23,378	0.06%	*p*=.58	
	2019	16	23,751	0.07%	*p*=.07	
	2020	8	22,703	0.04%	*p*=.19	
	2021	16	22,774	0.07%	*p*=.26	
Percentage of beneficiaries with a SUD diagnosis who received outpatient services	2017	6,471	22,119	29.26%		0.71
	2018	6,744	23,378	28.85%	*p*=.34	
	2019	6,846	23,751	28.82%	*p*=.95	
	2020	6,485	22,703	28.56%	*p*=.54	
	2021	7,500	22,774	32.93%	*p*<.001	
Percentage of beneficiaries with a SUD diagnosis who received intensive outpatient/partial hospitalization	2017	886	22,119	4.01%		–0.37
	2018	937	23,378	4.01%	*p=.99*	
	2019	704	23,751	2.96%	*p*<.001	
	2020	557	22,703	2.45%	*p*<.01	
	2021	670	22,774	2.94%	*p*<.01	
Percentage of beneficiaries with a SUD diagnosis who received residential/inpatient services	2017	4,451	22,119	20.12%		0.62
	2018	4,526	23,378	19.36%	*p*=.04	
	2019	4,654	23,751	19.59%	*p*=.52	
	2020	4,605	22,703	20.28%	*p*=.06	
	2021	5,188	22,774	22.78%	*p*<.001	
Percentage of beneficiaries with a SUD diagnosis who received withdrawal management services	2017	29	22,119	0.13%		0.04
	2018	45	23,378	0.19%	*p*=.10	
	2019	33	23,751	0.14%	*p*=.15	
	2020	46	22,703	0.20%	*p*=.10	
	2021	85	22,774	0.37%	*p*<.001	
Percentage of beneficiaries with a SUD diagnosis who received medication-assisted treatment (MAT)	2017	757	22,119	3.42%		0.81
	2018	936	23,378	4.00%	*p*<.01	
	2019	1,035	23,751	4.36%	*p*=.05	
	2020	1,152	22,703	5.07%	*p*<.001	
	2021	1,579	22,774	6.93%	*p*<.001	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
A Mantel-Haenszel chi-square test showed slope of the 5-year trend lines were statistically significantly different from horizontal (*p*<.001),
Trend reports the slope (i.e., the average change per year) measured in percentage points per year (pp/y).

Table 13. Measurements of Secondary Driver 2 – Receipt of Treatment for OUD

Secondary Driver 2 (*Related to Goal 1, Goal 2, and Goal 3*): *Improve adherence to treatment for OUD and other SUDs*

Type of SUD treatment used	Year	Numerator	Denominator	Rate	*p*-value	Trend
Overall percentage of beneficiaries with an OUD diagnosis who received SUD Treatment	2017	1,982	3,582	55.33%		*p*<.001 1.18
	2018	2,223	3,863	57.55%	*p*=.06	
	2019	2,184	3,833	56.98%	*p*=.90	
	2020	1,979	3,522	56.19%	*p*<.001	
	2021	2,238	3,546	63.11%	*p*<.001	
Stratification by Service Type (members may be counted for each service type)						
Percentage of beneficiaries with an OUD diagnosis who received early intervention (e.g., SBIRT)	2017	7	3,582	0.20%		*p*=.03 –0.04
	2018	11	3,863	0.28%	*p*=.43	
	2019	3	3,833	0.08%	*p*=.03	
	2020	3	3,522	0.09%	*p*>.99	
	2021	3	3,546	0.08%	*p*>.99	
Percentage of beneficiaries with an OUD diagnosis who received outpatient services	2017	1,462	3,582	40.82%		*p*<.001 1.37
	2018	1,689	3,863	43.72%	*p*<.01	
	2019	1,680	3,833	43.83%	*p*=.92	
	2020	1,502	3,522	42.65%	*p*=.31	
	2021	1,709	3,546	48.20%	*p*<.001	
Percentage of beneficiaries with an OUD diagnosis who received intensive outpatient/partial hospitalization	2017	152	3,582	4.24%		*p*<.001 –0.34
	2018	157	3,863	4.06%	*p*=.70	
	2019	120	3,833	3.13%	*p*=.03	
	2020	97	3,522	2.75%	*p*=.34	
	2021	113	3,546	3.19%	*p*=.28	
Percentage of beneficiaries with an OUD diagnosis who received residential/inpatient services	2017	869	3,582	24.26%		*p*=.14
	2018	902	3,863	23.35%	*p*=.36	
	2019	838	3,833	21.86%	*p*=.12	
	2020	808	3,522	22.94%	*p*=.27	
	2021	927	3,546	26.14%	*p*<.01	
Percentage of beneficiaries with an OUD diagnosis who received withdrawal management services	2017	8	3,582	0.22%		*p*=.02 0.07
	2018	10	3,863	0.26%	*p*=.76	
	2019	8	3,833	0.21%	*p*=.65	
	2020	11	3,522	0.31%	*p*=.38	
	2021	19	3,546	0.54%	*p*=.15	
Percentage of beneficiaries with an OUD diagnosis who received medication-assisted treatment (MAT)	2017	316	3,582	8.82%		*p*<.001 1.67
	2018	388	3,863	10.04%	*p*=.07	
	2019	382	3,833	9.97%	*p*=.91	
	2020	430	3,522	12.21%	*p*<.01	
	2021	570	3,546	16.07%	*p*<.001	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 5-year trend line is statistically significantly different from horizontal, and if significant, the slope measured in percentage points per year (pp/y).

Table 14. Measurements of Secondary Driver 2 – Peer Support Services

Secondary Driver 2 (*Related to Goals 1, 2, and 3*): *Improve adherence to treatment for OUD and other SUDs*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
Percentage of beneficiaries with a SUD diagnosis who received peer support services	2017	1,283	22,119	5.80%		*p*=.01 –0.12
	2018	1,377	23,378	5.89%	*p*=.68	
	2019	1,305	23,751	5.49%	*p*=.06	
	2020	1,153	22,703	5.08%	*p*=.045	
	2021	1,280	22,774	5.62%	*p*<.01	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 5-year trend line is statistically significantly different from horizontal, and if significant, the slope measured in percentage points per year (pp/y).

Over the five-year period, the percentages of members with a SUD diagnosis who received peer support services remained low, between 5% and 6%. These results do not indicate adherence to treatment for OUD and other SUDs is improving.

Conclusions Related to Goals 1, 2, and 3

Goal 1 – Identification, Initiation, and Engagement in Treatment for OUD and other SUDs

The findings related to Secondary Driver 2 provided some support to the Goal 1 evaluation hypothesis (the demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs). The rates of members with an OUD or other SUD receiving SUD treatment increased significantly in 2021, with between 6 and 7 percentage point increases; 50% of members with a SUD diagnosis, and 63% of members with an OUD diagnosis were receiving SUD services in 2021. While almost all service type strata within these measures had some increases, the overall increase in SUD treatment rates was primarily due to increases in outpatient services, inpatient/residential, and MAT. It should be noted, MAT rates remain low (16% and less) and continued improvement, building on 2021, is needed.

The following measures had low rates and remained generally flat over the 5-year period. Less than one-third of members with an OUD that were prescribed medication had continuity in pharmacotherapy with no more than a 7-day gap. Follow-up with members after ED visits with a principal diagnosis of alcohol or other drug use or dependence, is infrequently occurring (20% or less). Also, the rate of members with a SUD diagnosis receiving peer support services is very low, between 5% and 6%. Further improvement in this driver is needed to make progress towards this goal.

Goal 2 – Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment through improved access to other continuum of care services

The findings related to Secondary Driver 2 indicated there has been an increase in several continuum of care services; however, as noted above, continued improvement is needed. The number of ED visits for alcohol and other drug use or dependence decreased in 2019 and 2020. There were increases in members with an OUD or other SUD diagnosis who received residential/inpatient services, while members receiving outpatient services also increased. In absence of the information on the root causes for the changes, a definitive conclusion could not be made whether a positive or negative result is seen.

Goal 3 – Reductions in overdose deaths, particularly those due to opioids.

The assessment of Secondary Driver 2 supported the evaluation hypothesis for Goal 3 (the demonstration will decrease the rate of overdose deaths due to opioids). Members with an OUD diagnosis had higher increases in rates of SUD treatment and several service type strata. However, to have a strong impact on Goal 3, further improvement in this driver is needed.

Secondary Driver 3 (Related to Goals 2, 3, and 4)

Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment

The Secondary Driver 3 was assessed with three performance measures (Table 15). The indicate progress toward expanding access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment.

Table 15. Measurements of Secondary Driver 3

Secondary Driver 3 (*Related to Goals 2, 3, and 4*): *Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
Percentage of Inpatient OUD discharges with MAT claim	2017	13	369	3.52%		*p*<.01 1.37
	2018	31	453	6.84%	*p*=.04	
	2019	17	396	4.29%	*p*=.11	
	2020	23	394	5.84%	*p*=.32	
	2021	44	405	10.86%	*p*=.01	
Percentage of members with OUD diagnosis who have a MAT claim for OUD	2017	312	3,577	8.72%		*p*<.01 1.67
	2018	385	3,856	9.98%	*p*=.06	
	2019	379	3,828	9.90%	*p*=.90	
	2020	428	3,517	12.17%	*p*<.01	
	2021	565	3,540	15.96%	*p*<.001	
Residential and Inpatient OUD discharges with MAT claim	2017	25	587	4.3%		*p*.20
	2018	49	648	7.6%	*p*=.01	
	2019	19	596	3.2%	*p*<.001	
	2020	25	567	4.4%	*p*=.28	
	2021	49	637	7.7%	*p*=.02	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 5-year trend line is statistically significantly different from horizontal, and if significant, the slope measured in percentage points per year (pp/y).

The Secondary Driver 3 is focused on the expansion of access to MAT by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment. The percentages of inpatient OUD discharges with a MAT claim were low from 2017 to 2020, however, the 2021 rate doubled compared to preceding years and showed a statistically significant change from 2020. The results for the measure indicate that an improvement is being seen in Secondary Driver 3.

The percentages of members with OUD diagnosis who have a MAT claim for OUD increased statistically significantly from the previous year in 2020 and 2021 and increased over five years, averaging 1.67 percentage points change per year, which indicates improvement in Secondary Driver 3.

Conclusions Related to Goals 2, 3, and 4

Goal 2 – Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment through improved access to other continuum of care services.

The increases in MAT for members with an OUD diagnosis indicate improved access to other continuum of care services. This supports Goal 2. However, to have a strong impact on Goal 2, further improvement in this driver is needed.

Goal 3 – Reductions in overdose deaths, particularly those due to opioids.

The increases in MAT for members with an OUD diagnosis indicates improved access to services that support efforts towards reaching Goal 3. However, to have a strong impact on Goal 3, further improvement is needed.

Goal 4 – Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.

The increases in inpatient and residential OUD discharges with a MAT claim indicates improved access to services to support the reduction in readmissions.

Secondary Driver 4 (Related to Goals 2, 3, and 4)

Ensure access to treatment at all needed levels of care for SUD

The Secondary Driver 4 was examined by assessing four performance measures (Table 16). The results for these four measures did not provide enough evidence to indicate that an improvement is being made in ensuring access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD).

Table 16. Measurements of Secondary Driver 4

Secondary Driver 4 (*Related to Goals 2, 3, and 4*): *Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD)*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year.	2019	582	23751	2.45%		*p*<.01
	2020	502	22703	2.21%	*p*=.09	0.06
	2021	582	22774	2.56%	*p*<.001	pp/y
Measure	**Year**	**Numerator**	**Denominator**	**Days**		
Average length of stay for SUD treatment services within IMDs	2019	12,747	747	17.1		
	2020	10,151	489	20.8		
	2021	11,115	601	18.5		
Measure	**Year**	**Numerator**	**Denominator**	**per 1000**	***p*-value**	**Trend**
Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members SUD diagnosis	2017	4,451	22,119	201		
	2018	4,526	23,378	194	*p*=.04	*p*<.001
	2019	4,654	23,751	196	*p*=.52	6.3
	2020	4,605	22,703	203	*p*=.06	m/Km/y
	2021	5,188	22,774	228	*p*<.001	
Number of beneficiaries in outpatient, intensive outpatient, & partial hospitalization SUD treatment per 1,000 members SUD diagnosis	2017	10,119	22,119	457		
	2018	10,668	23,378	456	*p*=.80	*p*<.001
	2019	10,365	23,751	436	*p*<.001	−4.9
	2020	9,247	22,703	407	*p*<.001	m/Km/y
	2021	10,405	22,774	457	*p*<.001	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 3- or 5-year trend line is statistically significantly different from zero, and if significant, the slope in percentage points per year (pp/y) or members per 1,000 members per year (m/Km/y).

The percentages of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year did not show any significant changes from 2019 to 2021. The 2021 rate showed a significant increase compared to 2020, however, it was only slightly higher than the 2019 rate. The decline seen in 2020 rate corresponded with the onset of pandemic.

The rates for an average length of stay for SUD treatment services within IMDs did not show statistically significant changes from 2019 to 2021.

The number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with a SUD diagnosis did not show any statistically significant changes from 2017 to 2020. However, a statistically significant increase was seen from 2020 to 2021, with a twelve percent relative increase. Though, the increase was seen in 2021, these results provided limited insight to draw any definite conclusion about the measure's performance.

The number of beneficiaries in outpatient, intensive outpatient, and partial hospitalization SUD treatment per 1,000 members SUD diagnosis showed statistically significant declines in 2019 and 2020. In 2021, the rate increased back to those seen in 2017 and 2018.

Conclusions Related to Goals 2, 3, and 4:

Goal 2 – Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment through improved access to other continuum of care services.
The findings did not provide enough evidence to indicate support of Goal 2.

Goal 3 – Reductions in overdose deaths, particularly those due to opioids.
The findings did not provide enough evidence to indicate support of Goal 3.

Goal 4 – Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.
The findings did not provide enough evidence to indicate support of Goal 4.

Secondary Driver 5 (Related to Goals 2, 3, and 4)

Ensure inpatient & residential providers improve care coordination & transition of care to the community:
The Secondary Driver 5 was examined by assessing nine performance measures including four HEDIS measures. Of these nine measures, the results for five indicated that progress is being made towards ensuring inpatient and residential providers improve care coordination and the transition of care to the community. However, the results showed that further improvement is also needed in a few aspects of this driver.

As shown in Table 17, for the Follow-Up After ED Visit for Alcohol and Other Drug Abuse/Dependence (FUA) measure, rates for follow-up within 7 days and follow-up within 30 days were low for measurement years 2017 to 2020 (14.43% to 15.61% follow-up within 7 days and 21.32% to 22.95% for follow-up within 30 days). Changes were not statistically significant. These results did not indicate that an improvement is being seen in ensuring inpatient and residential providers improve care coordination and transition of care to the community.

Similarly, For Follow-Up After High-Intensity Care for SUD (FUI), 2019 and 2020 rates for follow-up within 7 days (21.92% and 20.76%, respectively) and follow-up within 30 days (42.12% and 39.62%) were low, based on comparison to Quality Compass national percentiles. Changes between years were not statistically significant. These results do not indicate improvement in the performance of Secondary Driver 5, and the results also showed poor performance relative to the nation.

The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) rates for initiation of treatment within 14 days of SUD diagnosis had an increasing trend from 2017 to 2020, with an average increase of 3.05 percentage points per year. The Quality Compass ranking for the measure also improved. The 2019 and 2020 rates for continued engagement within 34 days of the initial treatment were greater than the 2017 and 2018 rates; the average increase was 0.48 percentage points per year. The rates for initiation within 14 days indicated improvement of Secondary Driver 5. The rates for engagement within 34 days provided weaker supporting evidence.

Table 18 shows a statistically significant decreasing trend (improving 1.7 percentage points per year on average) was seen for a five-period from 2017 to 2021 for the 30-day readmission for SUD treatment measure. The decreases from 2018 to 2019 and 2019 to 2020 were statistically significant. These results are evidence that inpatient and residential providers are improving care coordination and transition of care to the community.

Table 17. Measurements of Secondary Driver 5 – HEDIS Rates

Secondary Driver 5 (*Related to Goals 2, 3, and 4*): *Ensure inpatient and residential providers improve care coordination and transition of care to the community*

Measure		Year	Numerator	Denominator	Rate	Rank	*p*-value	Trend
Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA)	**– Within 7 days**	2017	160	1,039	15.40	>66.67th		*p*=.88
		2018	234	1,499	15.61	>66.67th	*p*=.89	
		2019	211	1,462	14.43	≥50th	*p*=.37	
		2020	217	1,393	15.58	≥50th	*p*=.39	
	– Within 30 days	2017	233	1,039	22.43	>66.67th		*p*=.31
		2018	344	1,499	22.95	>66.67th	0.76	
		2019	312	1,462	21.34	≥50th	0.29	
		2020	297	1,393	21.32	≥50th	0.99	
Follow-Up After High-Intensity Care for SUD (FUI)	**– Within 7 days**	2019	89	406	21.92			
		2020	98	472	20.76	<25th	*p*=.68	
	– Within 30 days	2019	171	406	42.12			
		2020	187	472	39.62	<33.33rd	*p*=.45	
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Initiation within 14 days (Total)		2017	3,158	8,829	35.77	<25th		*p*<.01 3.05
		2018	3,239	8,945	36.21	<25th	*p*=.46	
		2019	3,363	8,162	41.20	<50th	*p*<.001	
		2020	3,692	8,338	44.28	<50th	*p*=.16	
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Engagement within 34 days (Total)		2017	1,057	8,829	11.97	<50th		*p*<.001 0.48
		2018	1,039	8,945	11.62	<50th	*p*=.54	
		2019	1,113	8,162	13.64	<50th	*p*<.001	
		2020	1,075	8,338	12.89	<50th	*p*<.001	

Rankings are based on Quality Compass national percentile rankings.
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 4-year trend line is statistically significantly different from horizontal, and if significant, the slope measured in percentage points per year (pp/y).

Table 18. Measurements of Secondary Driver 5 – Readmission Rates

Secondary Driver 5 (*Related to Goals 2, 3, and 4*): *Ensure inpatient and residential providers improve care coordination and transition of care to the community*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
30-Day Readmission for SUD treatment	2017	595	4,986	11.9%		1.7 decrease
	2018	617	5,171	11.9%	*p*>.99	
	2019	463	5,295	8.7%	*p*<.001	
	2020	349	5,327	6.6%	*p*<.001	
	2021	345	5,857	5.9%	*p*=.15	

The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the slope of the 5-year trend line in percentage points per year (pp/y). The slopes are statistically significantly different from horizontal (Mantel-Haenszel chi-square test, *p*<.001).

Emergency department utilization rates for SUD and OUD had decreasing linear trends from 2017 through 2021 (see Table 19). On average, ED utilization for SUD decreased 1.2 visits per 1,000 members per year. The decreasing trend began in 2019 Q4, before the COVID public health emergency. During the same period, inpatient utilization rates for SUD increased 0.5 stays per 1,000 members per year, on average. Inpatient utilization rates for OUD were relatively stable. In these rates, emergency department services billed as part of an inpatient claim are counted as inpatient stays and not as ED visits. This allows the rates to be added to obtain the number of ED visits plus inpatient stays, which averaged annual decreases of 0.7 visits or stays per 1,000 members.

Table 19. Measurements of Secondary Driver 5 – Service Utilization Rates

Secondary Driver 5 (*Related to Goals 2, 3, and 4*): *Ensure inpatient and residential providers improve care coordination and transition of care to the community*

Measure	Year	Numerator	Denominator	Per 1,000	Change per Year
ED utilization for SUD per 1,000 Medicaid beneficiaries (CMS Metric #23)	2017	8,454	398,162	21.2	1.2 decrease
	2018	8,869	398,148	22.3	
	2019	8,060	385,062	20.9	
	2020	7,246	407,623	17.8	
	2021	7,873	452,488	17.4	
ED utilization for OUD per 1,000 Medicaid beneficiaries (CMS Metric #23, OUD stratum)	2017	802	398,162	2.0	0.2 decrease
	2018	703	398,148	1.8	
	2019	610	385,062	1.6	
	2020	475	407,623	1.2	
	2021	571	452,488	1.3	
Inpatient stays for SUD per 1,000 Medicaid beneficiaries (CMS Metric #24)	2017	4,281	398,162	10.8	0.5 increase
	2018	4,548	398,148	11.4	
	2019	4,638	385,062	12.0	
	2020	5,305	407,623	13.0	
	2021	5,722	452,488	12.6	
Inpatient stays for OUD per 1,000 Medicaid beneficiaries (CMS Metric #24, OUD stratum)	2017	585	398,162	1.5	0.01 decrease
	2018	618	398,148	1.6	
	2019	589	385,062	1.5	
	2020	603	407,623	1.5	
	2021	650	452,488	1.4	

Source: KDADS
Numerator is the count of visits or stays in the measurement period. Denominator is the average monthly KanCare membership count. ED utilization numerators exclude emergency department visits that resulted in an inpatient stay.

Conclusions Related to Goals 2, 3, and 4

Goal 2 – Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.

The Secondary Driver 5's assessment supported the hypothesis for Goal 2, which stated the demonstration will decrease the rate of ED visits and inpatient hospitalizations related to SUD within the member population. However, some deficiencies were noted, indicating improvement efforts may be needed to realize Goal 2.

Goal 3 – Reductions in overdose deaths, particularly those due to opioids.

Assessment of the Secondary Driver 5 supported Goal 3's evaluation hypothesis (the demonstration will decrease the rate of overdose deaths due to opioids).

Goal 4 – Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.

The findings related to the assessment of the Secondary Driver 5 provided evidence supporting the evaluation hypothesis (among members receiving care for SUD, the demonstration will reduce readmissions to SUD treatment) of Goal 4.

Secondary Driver 6 (Related to Goals 2, 3, 4 and 5)

Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy

For the interim evaluation, two performance measures were assessed for Secondary Driver 6 (Table 20). The findings for both measures did not indicate improvement for this secondary driver.

From 2019 to 2021, the percentages of Medicaid members with a SUD diagnosis who had an assigned MCO care manager were quite low. For physical and behavioral health services to be properly integrated and coordinated, MCOs' care management teams should work with all members who have a SUD diagnosis and do not decline an offer for care management. The rate of increase from 2019 to 2021 (1.5 percentage points per year) indicates improvement in Secondary Driver 6 may be insufficient to obtain the Demonstration Goals.

The percentages of Medicaid members with a SUD diagnosis who had an assigned MCO care manager and a patient centered service plan (PCSP) were also very low (about 2% in 2021). Percentages declined each year. These findings did not indicate the Secondary Driver 6 improved.

Table 20. Measurements of Secondary Driver 6

Secondary Driver 6 (*Related to Goals 2, 3, 4, and 5*): *Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager	2019	3,544	16,321	21.71%		
	2020	4,055	15,164	26.74%	*p*<.001	1.49
	2021	4,253	17,233	24.68%	*p*<.001	
Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have service/treatment plan or person-centered service plan (PCSP)	2019	821	16,321	5.03%		
	2020	440	15,164	2.90%	*p*<.001	–1.46
	2021	364	17,233	2.11%	*p*<.001	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the slope of the 3-year trend line in percentage points per year (pp/y). The slopes are statistically significantly different from horizontal (Mantel-Haenszel chi-square test, *p*<.001).

Conclusions Related to Goals 2, 3, 4, and 5

The findings related to the assessment of the Secondary Driver 6 did not provide evidence to support the hypotheses for Goal 2 (decrease in ED visits and inpatient hospitalizations related to SUD), Goal 3 (decrease in rate of overdose deaths due to opioids), Goal 4 (reduce readmissions to SUD treatment), or Goal 6 (increase members with SUD who access care for physical health conditions). As a crucial step of the KanCare 2.0 Service Coordination Strategy is to make progress towards this goal, it should be implemented adequately.

Outcome Evaluation – Primary Drivers (Goals)

It should be noted, the primary drivers are also referred as demonstration goals.

Primary Driver 1 (Goal 1)

Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.

The Primary Driver 1 (Goal1) was examined by assessing two HEDIS measures (Table 21). These two are also measures of Secondary Driver 5. The findings for one measure indicated progress toward increasing the rates of identification, initiation, and engagement in treatment for OUD and other SUDs. However, the findings for the second measure provided much weaker evidence to indicate that progress is being

made. The results of both performance measures indicated further improvement is needed to make progress toward Goal 1.

Table 21. Performance Measures for SUD Demonstration Goal 1 (*Outcome Evaluation*)

Goal 1: *Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs*

Measure Description	Year	Numerator	Denominator	Rate	Rank	*p*-value	Trend
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Initiation within 14 days (Total)	2017	3,158	8,829	35.77%	<25th		*p*<.01 3.05
	2018	3,239	8,945	36.21%	<25th	*p*=.46	
	2019	3,363	8,162	41.20%	<50th	*p*<.001	
	2020	3,692	8,338	44.28%	<50th	*p*=.16	
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – – Engagement within 34 days (Total)	2017	1,057	8,829	11.97%	<50th		*p*<.001 0.48
	2018	1,039	8,945	11.62%	<50th	*p*=.54	
	2019	1,113	8,162	13.64%	<50th	*p*<.001	
	2020	1,075	8,338	12.89%	<50th	*p*<.001	

Rankings are based on Quality Compass national percentile rankings.
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the *p*-value for Mantel-Haenszel chi-square test to see if the slope of the 5-year trend line is statistically significantly different from horizontal, and if significant, the slope measured in percentage points per year (pp/y).

The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) rates for initiation of treatment within 14 days of SUD diagnosis had an increasing trend from 2017 to 2020, with an average increase of 3.05 percentage points per year. The Quality Compass ranking for the measure also improved. The 2019 and 2020 rates for continued engagement within 34 days of the initial treatment were greater than the 2017 and 2018 rates; the average increase was 0.48 percentage points per year. The rates for initiation within 14 days indicated improvement of Secondary Driver 5. The rates for engagement within 34 days provided weaker supporting evidence.

Primary Driver 2 (Goal 2)

Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services

The Primary Driver 2 (Goal 2) was assessed using four performance measures (Table 22). It should be noted, these four measures were also assessed to evaluate Secondary Driver 5. Two measures indicated that some improvement was being made towards reducing the utilization of ED and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services (Goal 2).

Emergency department utilization rates for members with SUD and OUD diagnoses had decreasing linear trends from 2017 through 2021 that began before the COVID public health emergency. During the same period, inpatient utilization rates for members with SUD diagnoses increased, trending upward. Inpatient utilization rates for OUD were relatively stable.

Table 22. Performance Measures for SUD Demonstration Goal 2 (*Outcome Evaluation*)

Goal 2: *Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services*

Measure	Year	Numerator	Denominator	Per 1,000	Change per Year
ED utilization for SUD per 1,000 Medicaid beneficiaries (CMS Metric #23)	2017	8,454	398,162	21.2	1.2 decrease
	2018	8,869	398,148	22.3	
	2019	8,060	385,062	20.9	
	2020	7,246	407,623	17.8	
	2021	7,873	452,488	17.4	
ED utilization for OUD per 1,000 Medicaid beneficiaries (CMS Metric #23, OUD stratum)	2017	802	398,162	2.0	0.2 decrease
	2018	703	398,148	1.8	
	2019	610	385,062	1.6	
	2020	475	407,623	1.2	
	2021	571	452,488	1.3	
Inpatient stays for SUD per 1,000 Medicaid beneficiaries (CMS Metric #24)	2017	4,281	398,162	10.8	0.5 increase
	2018	4,548	398,148	11.4	
	2019	4,638	385,062	12.0	
	2020	5,305	407,623	13.0	
	2021	5,722	452,488	12.6	
Inpatient stays for OUD per 1,000 Medicaid beneficiaries (CMS Metric #24, OUD stratum)	2017	585	398,162	1.5	0.01 decrease
	2018	618	398,148	1.6	
	2019	589	385,062	1.5	
	2020	603	407,623	1.5	
	2021	650	452,488	1.4	

Source: KDADS
Numerator is the count of visits or stays in the measurement period. Denominator is the average monthly KanCare membership count.
ED utilization numerators exclude emergency department visits that resulted in an inpatient stay.

Primary Driver 3 (Goal 3)

Reductions in overdose deaths, particularly those due to opioids.

The Primary Driver 3 had three performance measures (Table 23). The findings of one indicated that some improvement is being made towards reduced use of opioid drugs; however, the measure directly assessing the opioid drug overdose death rates did not indicate any improvement. The findings of the third measure are too preliminary to provide any conclusion regarding its contribution towards making progress to achieve Goal 3.

Table 23. Performance Measures for SUD Demonstration Goal 3 (*Outcome Evaluation*)

Goal 3: *Reductions in overdose deaths, particularly those due to opioids*

Measure	Year	Numerator	Denominator	Per 1,000
Opioid Drug Overdose Deaths. (CMS Metric #27, OUD Stratum)	2019	34	412,812	0.08
	2020	47	404,701	0.12
	2021	104	511,960	0.20
Use of Opioids at High Dosage in Persons without Cancer per 1,000 Medicaid beneficiaries. (CMS Metric #18)	2019	390	3,802	103
	2020	262	2,731	95.9
Concurrent use of opioids and benzodiazepines per 1,000 Medicaid beneficiaries. (CMS Metric #21)	2019	0	2,758	0
	2020	275	2,856	9.6

Source: KDADS
Numerator is the count of visits or stays in the measurement period. Denominator is the average monthly KanCare membership count.

Small but steady increases in the Opioid Drug Overdose death rates were seen from 2019 to 2021. These findings indicate no improvement was being made toward Goal 3.

Rates for Use of Opioids at High Dosage in Persons without Cancer per 1,000 Medicaid Beneficiaries decreased from 2019 to 2020. These finding did indicate that some improvement is being made towards Goal 3.

The State informed providers in KMAP GENERAL BULLETIN 20191, "Effective October 1, 2020 through September 30, 2025, all Medication Assisted Treatment (MAT) drugs and biological products, used for Opioid Use Disorder (OUD) will be covered. All MAT drugs and biologicals billed through the medical benefit require a diagnosis code to be considered for payment."[10] As per this notification, information available on concurrent use of opioids and benzodiazepines is very preliminary. Thus, no conclusions were made about this measure or its contribution towards the Goal 3.

Primary Driver 4 (Goal 4)

Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs

The Primary Driver 4 (Goal 4) was examined by assessing two performance measures (Table 24). The findings for both measures indicate that a progress is made towards achieving Goal 4.

Table 24. Performance Measures for SUD Demonstration Goal 4 (*Outcome Evaluation*)

Goal 4: *Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs*

Measure	Year	Numerator	Denominator	Rate	*p*-value	Trend
30-Day Readmission for SUD treatment	2017	595	4,986	11.9%		1.7 decrease
	2018	617	5,171	11.9%	*p*>.99	
	2019	463	5,295	8.7%	*p*<.001	
	2020	349	5,327	6.6%	*p*<.001	
	2021	345	5,857	5.9%	*p*=.15	
30-Day Readmission for SUD treatment – OUD discharges	2017	79	628	12.6%		1.9 decrease
	2018	85	675	12.6%	*p*>.99	
	2019	42	596	7.0%	*p*<.01	
	2020	30	527	5.7%	*p*=.36	
	2021	47	717	6.6%	*p*=.53	

Percentages are annual rates (members may be counted once per year).
The *p*-value reports a Pearson chi-square test for statistically significant differences between the year's rate and the prior year's rate.
Trend reports the slope of the 5-year trend line in percentage points per year (pp/y). The slopes are statistically significantly different from horizontal (Mantel-Haenszel chi-square test, *p*<.001).

A steady decline is seen in the 30-Day Readmission for SUD treatment rates, along with a statistically significant decreasing trend over a five-year period, with an average decrease of 1.7 percentage points per year from 2017 to 2021. These findings indicate that a progress is made towards achieving Goal 4.

Similarly, a steady decline is seen in the rates for the measure—30-Day Readmission for SUD treatment – OUD discharges, along with a statistically significant decreasing trend over a five-year period, with about an average decrease of 2.0 percentage points per year from 2017 to 2021. These findings indicate that a progress is made towards achieving Goal 4.

Primary Driver 5 (Goal 5)

Improved access to care for physical health conditions among members with OUD or other SUDs

The Primary Driver 5 (Goal 5) was examined by assessing four performance measures (Table 25). The

findings for the four measures did not indicate that the SUD demonstration specifically is improving access to care for physical health conditions among members with OUD or other SUDs. However, timeliness of prenatal care improved for both the SUD intervention group and non-SUD comparison group.

Table 25. Performance Measures for SUD Demonstration Goal 5 (*Outcome Evaluation*)

Goal 5: *Improved access to care for physical health conditions among members with OUD or other SUDs*

	SUD Intervention Group		SUD Comparison Group		Statistics	
	Rate	Denominator	Rate	Denominator	Difference	Significance
Annual Dental Visit (ADV)						
2016–2018	55.4%	1,211	52.3%	97,641	3.1 pp	*p*=.03
2019–2021	49.6%	1,553	47.9%	134,049	1.7 pp	*p*=.19
Difference, p-value	-5.8 pp	*p*<.01	-4.4 pp	*p*<.001		
RFR Improvement	-13.1%		-9.1%			*p*=.35
Adolescent Well-Care Visit (AWC)						
2016–2018	35.2%	1,211	33.1%	97,641	2.1 pp	*p*=.12
2019–2021	34.6%	1,553	32.6%	134,049	2.0 pp	*p*=.09
Difference, p-value	-0.6 pp	*p*=.74	-0.5 pp	*p*=.01		
RFR Improvement	-0.9%		-0.7%			*p*=.95
Prenatal and Postpartum Care (PPC) – Timeliness of Prenatal Care						
2016–2018	27.3%	802	27.6%	32,223	-0.3 pp	*p*=.87
2019–2021	38.6%	766	35.4%	31,463	3.3 pp	*p*=.06
Difference, p-value	11.3 pp	*p*<.001	7.8 pp	*p*<.001		
RFR Improvement	15.6%		10.8%			*p*=.15
Prenatal and Postpartum Care (PPC) – Postpartum Care						
2016–2018	19.8%	802	26.5%	32,223	-6.7 pp	*p*<.001
2019–2021	18.1%	766	24.5%	31,463	-6.4 pp	*p*<.001
Difference, p-value	-1.7 pp	*p*<.001	-2.0 pp	*p*<.001		
RFR Improvement	-2.1%		-2.7%			*p*=.77

Measures were calculated from MMIS encounter data based on specifications for HEDIS Health Plan measures. Since specification changes for PPC between measurement years 2018 and 2019 caused a break in trending, HEDIS MY 2021 specifications were used for PPC. Rates differ from Certified, Audited HEDIS Health Plan rates calculated by MCOs due to differences in available source data. The Intervention Group is members aged 16–75 who had a SUD diagnosis in the measurement year. Comparison Group are members aged 16–75 without a SUD diagnosis. Differences between rates, shown as percentage points (pp), were tested for statistical significance using Person's chi-square. Reduction in failure rate (RFR) measures improvement relative to the amount of possible improvement. The formula is:

RFR = (Final Rate minus Initial Rate)/(Goal minus Initial Rate), where Goal = 100% or 0%, depending on the measure.

The goal for ADV, AWC, and PPC was 100%. A chi-square test was used to test for equality of RFR improvements.

Measure 1: Annual Dental Visit (ADV)

Results do not establish that the KanCare 2.0 SUD Demonstration had a positive impact on Annual Dental Visit rates. The Intervention Group's RFR improvement was not statistically different from that of the Comparison Group. The RFR, which measures improvement relative to the amount of possible improvement, should be higher for the intervention group to show effectiveness. The following results were seen for ADV measure:

- The 2016–2018 ADV rates were for Intervention Group (55.4%) and Comparison Group (52.3%) were very similar, within 3.1 percentage points.
- The groups had similar rate decreases for the 2019–2021 remeasurement period. The Intervention Group's ADV rate decreased 5.9 percentage points (to 49.6%), and Comparison Group's ADV rate decreased 4.4 percentage points (to 47.9%). Negative values are displayed in Table # to indicate the rate changes were not improvements.

- The RFR improvements were also about the same. The RFR for the Intervention group was –13.1%; the formula is RFR = (49.6% – 55.4%)/(100% – 55.4%). The RFR for Comparison Group was –9.1%.
- The difference in RFRs was not statistically significant (*p*=.35).
- The rate decreases between 2016–2018 and 2019–2021 were statistically significant, but this was expected; it was assumed the COVID-19 pandemic would impact ADV rates. Also, the denominators are large, so small changes in rates would yield significant findings.
- The differences between Intervention Group and Comparison Group rates are indications of comparability of the two groups. The significance of the differences for 2016–2018 was not surprising given the denominator sizes. The ADV rates for ages 19–20 are generally lower than rates for younger members, and the distribution of members of a given age differ between the groups; adjusting for age may improve comparability. Differences in rates between groups are accounted for by comparing RFRs instead of percentage point differences between years.

Measure 2. Adolescent Well-Care Visit (AWC)

Results do not establish that the SUD Demonstration had a positive impact on Adolescent Well-Care Visit rates. AWC rates decreased both the Intervention Group and Comparison Group, but the decreases were less than 1 percentage point. The difference between the RFRs was not statistically significant. The following results were seen for AWC measure:

- The 2016–2018 AWC rates for the Intervention Group and the Comparison Group were 35.2% and 33.1%, respectively, which was not statistically significant.
- The Intervention Group's rate decreased 0.6 percentage points. The rate for Comparison Group decreased 0.5 percentage points.
- The RFR for the Intervention Group was –0.9%. The RFR for Comparison Group was –0.7%. The difference in RFRs was not statistically significant (*p*=.95).

Measure 3. Prenatal and Postpartum Care (PPC) – Timeliness of Prenatal Care

Results do not establish that the SUD Demonstration had a positive impact on Prenatal and Postpartum Care (PPC) – Timeliness of Prenatal Care rates. Timeliness of Prenatal Care rates improved for both the Intervention Group and Comparison Group. Although the rate increase was greater for the Intervention Group, the difference between the RFRs was not statistically significant. The following results were seen for Timeliness of Prenatal Care measure:

- The 2016–2018 Timeliness of Prenatal Care rates for the Intervention Group and the Comparison Group were 27.3% and 27.6%, respectively, which was not statistically significant.
- Both groups had statistically significant rate increases. The Intervention Group's rate increased 11.3 percentage points. The rate for Comparison Group increased 7.8 percentage points.
- The RFR for the Intervention Group was 15.6%, which was better than the RFR for Comparison Group (10.87%). However, the difference in RFRs was not statistically significant (*p*=.15).

Measure 4. Prenatal and Postpartum Care (PPC) – Postpartum Care

Results do not establish that the SUD Demonstration had a positive impact on Prenatal and Postpartum Care (PPC) – Postpartum Care rates. The rates decreased similarly for both the Intervention Group and Comparison Group, and difference between the RFRs was not statistically significant. The following results were seen for the Postpartum Care measure:

- The 2016–2018 Postpartum Care rates for Comparison Group (26.5%) was better than the Intervention Group's rate (19.8%).
- The Intervention Group's rate decreased 1.7 percentage points. The rate for Comparison Group decreased 2.0 percentage points.

- The RFR for the Intervention Group (–2.1%) and the RFR for Comparison Group (–2.7%) were not statistically significant.

Evaluation Measures for KanCare 2.0 Hypothesis 4

Four evaluation measures were examined to evaluate KanCare 2.0 Hypothesis 4 (Table 26). The findings for the four measures did not indicate improvement in the services provided in IMDs for KanCare members to increasing access to SUD treatment services.

Table 26. Measurements for KanCare 2.0 Hypothesis 4

Hypothesis 4: ***Removing payment barriers for services provided in IMDs for KanCare members will result in improved member access to SUD treatment services***

Measure	Status			
Number of IMDs providing SUD services **Number of geographic locations of IMDs providing SUD services**	14 submitted claims in 2019, 16 in 2020, and 14 in 2021 19 IMD located in 15 counties are network providers			
	Year	**Admissions**		**Members**
Number of admissions with SUD treatment services in IMDs	2019	733		497
	2020	461		384
	2021	580		478
	Year	**Total Days**	**Stays**	**Avg Days**
Average length of stay for SUD treatment services within IMDs	2019	12,747	747	17.1
	2020	10,151	489	20.8
	2021	11,115	601	18.5

Admissions do not equal Stays because year of admission may differ from date of discharge (used to count stays).

There are nineteen IMDs located in fifteen counties credentialed to provide services for Medicaid. The number of IMDs providing SUD services who submitted claims in 2019 and 2021 was the same, with two more IMDs submitting claims in 2019. The number of admissions with SUD treatment in IMDs were lower in 2020 and 2021 compared to 2019. The average length of stay for SUD treatment services within IMDs did not show much variation.

Evaluation of Cross-Cutting Cost Measures

Based on paid claims, the SUD demonstration has maintained budget neutrality in the first three years. KFMC is working with KDADS to further identify the administrative costs that could be included in the evaluation of the cost measures. The findings of the evaluation will be included in the summative evaluation of the SUD demonstration.

Amounts paid to providers for SUD services by the MCO were tabulated from encounters for 2017 to 2021. Total amounts paid and a capitated rate (amount paid per member with SUD diagnosis) are displayed in Table 27, stratified by type of care. Across the five years, costs per member slightly declined. The costs per member were decreased an average of $33 per year for the total KanCare 2.0 SUD treatment spending amount. An alternate division of spending amounts for 2019 to 2021 is displayed in Table 28, which breaks out spending for treatment in IMDs and includes spending for assessments and SBIRT that do not result in a SUD diagnosis. Within the five years, spending tended to be lower in 2019 and 2020 than in 2017, 2018, or 2021. Consequently, the increasing three-year trend shown in Table 28 is a return to the earlier spending levels.

Table 27. Type of Care Cost Drivers

Treatment costs for members with SUD diagnosis, stratified by types of care using claims data

Measure	Year	Total Paid	Members	$/Member	Trend
ED Outpatient SUD Spending	2017	$970,225	22,119	$44	($0.70) per year decrease
	2018	$1,133,938	23,378	$49	
	2019	$1,025,114	23,751	$43	
	2020	$958,765	22,703	$42	
	2021	$997,211	22,774	$44	
Non-ED Outpatient SUD Spending	2017	$12,272,872	22,119	$555	($27) per year decrease
	2018	$11,863,727	23,378	$507	
	2019	$11,185,994	23,751	$471	
	2020	$9,644,711	22,703	$425	
	2021	$10,482,530	22,774	$460	
Inpatient and Residential SUD Spending	2017	$39,413,465	22,119	$1,782	($9) per year decrease
	2018	$49,238,017	23,378	$2,106	
	2019	$39,083,659	23,751	$1,646	
	2020	$39,309,490	22,703	$1,731	
	2021	$43,798,079	22,774	$1,923	
Pharmacy SUD Spending	2017	$864,607	22,119	$39	$4 per year
	2018	$1,170,824	23,378	$50	
	2019	$1,103,346	23,751	$46	
	2020	$1,123,968	22,703	$50	
	2021	$1,348,016	22,774	$59	
Total KanCare 2.0 SUD Treatment Spending	2017	$53,521,169	22,119	$2,437	($33) per year decrease
	2018	$63,406,506	23,378	$2,731	
	2019	$52,398,113	23,751	$2,217	
	2020	$51,036,934	22,703	$2,261	
	2021	$56,625,836	22,774	$2,493	

Denominator is the number of KanCare 2.0 members with a SUD diagnosis and a SUD treatment during the measurement period and/or in the 12 months before the measurement period (based on paid claims).
Trend is the average change in spending per member over five years calculated as the slope of the linear trend line.

Table 28. SUD Cost Drivers

Treatment costs for members, stratified by services rendered within IMDs and other SUD-related costs for members with and without SUD diagnosis

Measure	Year	Total Paid	Members	$/Member	Trend
SUD Spending on Inpatient/ Residential Services and Pharmaceuticals Within IMDs	2019	$2,285,660	605	$3,778	($79) per year decrease
	2020	$1,867,069	515	$3,625	
	2021	$2,132,881	589	$3,621	
SUD Spending on Services Other Than Within IMDs	2019	$50,112,453	23,751	$2,110	$141 per year
	2020	$49,169,865	22,703	$2,166	
	2021	$54,492,955	22,774	$2,393	
SUD Spending on SBIRT Services for Beneficiaries Without SUD Diagnosis	2019	$0	0	$0	
	2020	$0	0	$0	
	2021	$0	0	$0	
SUD Spending on Assessment Services for Beneficiaries Without SUD Diagnosis (excludes SBIRT)	2019	$13,390	103	$130	($0.50) per year decrease
	2020	$10,099	78	$129	
	2021	$13,000	101	$129	
Total KanCare 2.0 SUD Treatment Spending per Member with SUD Assessment or Diagnosis	2019	$52,411,503	23,854	$2,197	$140 per year
	2020	$51,047,033	22,781	$2,241	
	2021	$56,638,836	22,875	$2,476	

Denominator is the number of KanCare 2.0 members with a SUD diagnosis and a SUD treatment during the measurement period and/or in the 12 months before the measurement period (based on paid claims).
Trend is the average change in spending per member over three years calculated as the slope of the linear trend line.

Conclusions

KFMC prepared this interim SUD Demonstration evaluation report to reflect evaluation progress and to present findings for January 2019 through December 2021. The SUD evaluation has two components: process evaluation and the outcome evaluation. The process evaluation is focused on examining the demonstration's six secondary drivers. The outcome evaluation is focused on whether the demonstration made progress towards achieving its five goals (also referred as *primary drivers*).

It should be noted, the COVID-19 pandemic affected the utilization of health care services throughout the state and may have impacted the outcomes from this period. Thus, the results presented here should be interpreted with caution. Where feasible, adjustments were made to the analytic plans to account for the pandemic's impact on measurement outcomes. Data and analytical results for 2022 and 2023 may provide a better assessment of the impact of the SUD Demonstration's efforts.

Process Evaluation – Secondary Drivers

The conclusions based on the assessment of performance measures to evaluate the demonstration's six secondary drivers are summarized in Table 29.

Table 29. Summary of Conclusions for Process Evaluation (Secondary Drivers)

Secondary Driver	Goals	Process Evaluation Conclusions
1. Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment	1	• One performance measure was assessed for Secondary Driver 1. • Evaluation results did not indicate that an improvement is being seen in this driver. • Further improvements are needed in this driver.
2. Improve adherence to treatment for OUD and other SUDs	1, 2, 3	• Five performance measures were assessed for Secondary Driver 2. • Two out of five measures and some of their service type strata indicated improvement in this driver. • The other three performance measures indicated further improvements are needed.
3. Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment	2, 3, 4	• Two performance measures were assessed for Secondary Driver 3. • Results indicated improvement in this driver. • Additional improvements will assist progress for this driver.
4. Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD)	2, 3, 4	• Four performance measures were assessed for Secondary Driver 4. • Results did not provide enough evidence to indicate improvement. • Improvements are needed in this driver.
5. Ensure inpatient and residential providers improve care coordination and transition of care to the community	2, 3, 4	• Nine performance measures were assessed for Secondary Driver 5. • Five out of nine measures indicated improvement in this driver. • However, further improvements are needed.
6. Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy	2, 3, 4, 5	• Two performance measures were assessed for Secondary Driver 6. • Results did not indicate improvement in this driver, specifically by the SUD demonstration. • Further improvements are needed in this driver.

Process Evaluation Findings Showing Progress Towards SUD Demonstration Goals

Progress is noted in several areas, although continued improvement is needed for all areas.

- The rates of members with an OUD or other SUD receiving SUD treatment increased significantly in 2021. While almost all service type strata within these measures had some increase in 2021, most notable were increases in outpatient services and MAT. Members with an OUD diagnosis had higher rate increases for SUD treatment, overall and for several service type strata.
- There were increases the percentages of inpatient and residential OUD discharges with a MAT claim.
- There was a decrease in the rate for use of opioids at high dosage (excluding persons with cancer).
- The rates for the Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days and Engagement within 34 days) improved.
- ED visits per 1,000 members decreased for members with OUD and members with any SUD. There was a steady decline in 30-day readmissions for OUD and all SUD discharges.

Opportunities for Improvement

- Improvements in the provision of early intervention (SBIRT) and care for SUD after provision of SBIRT services are needed.
- The rates for the Continuity of Pharmacotherapy for OUD (POD) measure were low and without change between years.
- Rates for both indicators of the Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA) were low (Within 7 days and Within 30 days).
- MAT rates remain low (16% and less), and continued improvement, building on 2021, is needed.
- Peer Support services were not provided to most of the members to assist them in continuing their SUD treatment.
- Improvements are needed for follow-up after ED visits for SUD treatment and after high-intensity care for SUD.
- The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days, Engagement within 34 days) were low. Rates improved in 2020; however, further improvement is needed.
- A lack of standardization of the Health Screening Tool, Health Risk Assessment (HRA), Needs Assessment, and PCSP variable fields (in the datasets provided by the MCOs) created limitations in identifying members with SUD who received care coordination in line with the KanCare 2.0 program service coordination strategy.
- Low percentage of members with SUD who were assigned MCO care managers and who had a PCSP hindered progress towards multiple demonstration goals.

Recommendations

- Review and improve the efforts for providing support to the expansion SBIRT among physical health and behavioral health service providers to identify members at different risk levels for OUD or other SUDs and provide the appropriate level of referral to SUD providers.
- Improve availability and utilization of peer support services to assist members with SUD in adhering to their SUD treatment.
- Improve efforts, including care coordination, to assist members with SUD in scheduling and receiving follow-up visits at an appropriate level of care after ED visits for SUD treatment and after receipt of high-intensity care for SUD.
- Review and improve the steps applied by the three MCOs to ensure all members with SUD eligible to receive KanCare 2.0 Service Coordination Strategy (such as use of the Health Screening Tool) are identified and receive an HRA Needs Assessment, PCSP, and coordinated care through an assigned

care manager, as appropriate, during the remaining years of the SUD demonstration. Application of the Service Coordination Strategy to members with SUD will assist in achieving performance goals.

Outcome Evaluation – Primary Drivers (Goals)

The conclusions based on the assessment of performance measures to evaluate demonstration's five primary drivers are summarized in Table 30.

Table 30. Summary of Conclusions for Outcome Evaluation (Primary Drivers)

Primary Driver (Demonstration Goal)	Secondary Drivers	Outcome Evaluation Conclusions
1. Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.	1, 2	• Two outcome measures were assessed for Primary Driver 1. • One of the two measures indicated improvement in this driver. • Further improvements are needed in this driver.
2. Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services	2, 3, 4, 5, 6	• Four outcome measures were assessed for Primary Driver 2. • Emergency department utilization results indicated improvement in this driver. • Additional improvements will assist in further progress in this driver.
3. Reductions in overdose deaths, particularly those due to opioids	2, 3, 4, 5, 6	• Three outcome measures were assessed for Primary Driver 3. • One measure indicated improvement in this driver. • The opioid drug overdose death rates did not indicate improvement. • The findings of the third measure are preliminary and a conclusion could not be drawn. • Further improvements are needed in this driver.
4. Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs	3, 4, 5, 6	• Two outcome measures were assessed for Primary Driver 4. • Results indicated improvement in this driver. • Additional improvements will assist in further progress in this driver.
5. Improved access to care for physical health conditions among members with OUD or other SUDs	6	• Four outcome measures were assessed for Primary Driver 5. • Three measures did not indicate improvement in this driver. • One measure showed improvement that could not be attributed to the demonstration strategies. • Further improvements are needed in this driver.

Outcome Evaluation Findings Showing Progress Towards SUD Demonstration Goals

- The rates for the Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days, Engagement within 34 days) improved. However, further improvement is needed since rates remained low.
- ED and inpatient stays per 1,000 members decreased for members with an OUD and members with any SUD.
- Rates of the use of opioids at high dosage for persons without cancer declined.
- 30-day readmission rates for SUD and OUD treatments declined.
- Timeliness of Prenatal Care rates improved for the SUD intervention population and for the comparison group.

Opportunities for Improvement

- Further improvement is needed to reduce use of opioids at high doses among patients without cancer for their pain management treatments.
- The Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) measures (Initiation within 14 days; and Engagement within 34 days) were low, indicating improvements are needed.
- Improvement in care coordination to assist members with SUD in receiving appropriate services for prevention and treatment of physical health conditions is needed.

Recommendations

- Strategies should be identified and implemented to help ensure members are aware of primary prevention and availability of treatment.
- Strategies should be identified and implemented to help ensure providers are aware of the SUD demonstration strategies and to identify and address associated provider training and skill building opportunities.
- Strategies should be identified and implemented to improve the use of early intervention services (SBIRT) and outpatient services among members with SUD. The improvement in the appropriate use of these levels of care will assist in reducing the burden on providers and facilities providing higher levels of care.
- Address barriers and challenges encountered by the members with SUD for engaging in the needed SUD treatment. Enhance action steps to improve availability of supportive services, such as peer support services, coordination of care for ensuring regular follow-up visits with SUD care providers, and provider trainings to assist members with SUD to engage in receiving needed SUD treatment.
- Review and improve the steps applied by the three MCOs to ensure all members with an SUD diagnosis receive an HRA and Needs Assessment, along with a PCSP and coordinated care, as appropriate. Application of the Service Coordination Strategy for members with an SUD diagnosis will help ensure coordination of care for co-occurring physical and mental health conditions.

Evaluation KanCare 2.0 Hypothesis 4

It was not clear how many IMDs are currently providing SUD treatment services to the KanCare members. The number of admissions with SUD treatment services in IMDs and average length of stay for SUD treatment services within IMDs did not show improvements from 2019 to 2021.

Opportunities for Improvement

- The information regarding the total number of IMDs in State providing SUD services to KanCare members is not readily available.

Recommendations

- Insert and maintain an IMD designation flag in the provider tables of the Kansas Modular Medicaid System.
- Review and address the barriers encountered by the IMDs and the members in provision and utilization of SUD treatment services through IMDs.

Evaluation of Cost Measures

Based on paid claims, the SUD demonstration has maintained budget neutrality in the first three years. KFMC is working with KDADS to further identify the administrative costs that could be included in the

evaluation of the cost measures. The findings of the evaluation will be included in the summative evaluation of the SUD demonstration.

Interpretations, Policy Implications, and Interactions with Other State Initiatives

KFMC will address the policy implications and interactions with other state initiatives in the summative SUD Demonstration evaluation. For this interim evaluation, the following interpretations could be made.

- It is not yet known how much the COVID-19 pandemic will influence the impact of the SUD Demonstration 2.0 program. It will take more years of data to assess the impact of the program, overall, outside of the context of the pandemic.
- It is difficult to interpret the interactions with other Medicaid and State programs due to the pandemic, as well. SUD Demonstration activities were drastically affected during the onset of the pandemic. The MCOs were instructed to pause many initiatives with members and providers in order to address the public health emergency.

Lessons Learned and Recommendations for State

Lessons learned and recommendations for other State Medicaid agencies will be further addressed in the summative SUD Demonstration evaluation report.

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End of written report

Appendix A

KanCare 2.0 Interim Evaluation Report

Evaluation of the State of Kansas Medicaid Section 1115(a) Demonstration Substance Use Disorder

Reporting Period – January 2019 – October 2021

Comparison of Interim and Summative Evaluation Analytic Methods

Table A1. Comparison of Interim and Summative Evaluation Analytic Methods

Secondary Driver 1 (*Related to Goal 1*): *Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Receipt of care for SUD after SBIRT Service	Descriptive statistics; Year-over-Year (YoY); Trend (Mantel-Haenszel X^2) • 5 years (2017–2021)	Descriptive statistics; Interrupted Time Series (ITS) (pre- & post-intervention comparison); Trend • 7 years (2017–2023)
Excluded from Interim: Percentage of physical health and behavioral health service providers that billed SBIRT services	SBIRT providers were not identifiable in the available data	Descriptive statistics; ITS; Trend • 7 years (2017–2023)
Secondary Driver 2 (*Related to Goals 1, 2, and 3*): *Improve adherence to treatment for OUD and other SUDs*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Common to all Driver 2 measures	Descriptive statistics; YoY; Trend	Descriptive statistics; ITS; Trend
Continuity of Pharmacotherapy for OUD (POD)	• 2 years (2019–2020)	• 4 years (2019–2022)
Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA)	• 4 years (2017–2020)	• 6 years (2017–2022)
Percentage of beneficiaries with a SUD diagnosis who received SUD Treatment	• 5 years (2017–2021) • Stratified by service type	• 7 years (2017–2023) or 84 months
Percentage of beneficiaries with an OUD diagnosis who received SUD Treatment	• 5 years (2017–2021) • Stratified by service type	• 7 years (2017–2023) or 84 months • Stratified by service type
Percentage of beneficiaries with a SUD diagnosis who received peer support services	• 5 years (2017–2021) • Stratified by service type	• 7 years (2017–2023) or 84 months • Stratified by service type
Secondary Driver 3 (*Related to Goals 2, 3, and 4*): *Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Common to all Driver 3 measures	Descriptive statistics; YoY; Trend	Descriptive statistics; ITS; Trend Possible block grant or urban/rural comparison.
Percentage of members with OUD diagnosis who have a MAT claim for OUD	• 5 years (2017–2021)	7 years (2017–2023) or 84 months
Percentage of inpatient OUD discharges with MAT claim	• 5 years (2017–2021)	Replace with Residential/Inpatient measure.
Excluded from Interim: Percentage of residential OUD discharges with MAT claim	• Volume was too low to report.	Replace with Residential/Inpatient measure.
New in Interim: Percentage of residential and inpatient OUD discharges with MAT claim	• 5 years (2017–2021)	• 7 years (2017–2023) or 28 quarters if volume sufficient
Secondary Driver 4 (*Related to Goals 2, 3, and 4*): *Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD)*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Common to all Driver 4 measures	Descriptive statistics; YoY; Trend	Descriptive statistics; ITS; Trend
Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year	• 3 years (2019–2021)	• 5 years (2019–2023) or 20 quarters
Average length of stay for SUD treatment services within IMDs (CMS Metric #36).	• 3 years (2019–2021)	• 5 years (2019–2023) or 20 quarters
Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis	• 5 years (2017–2021)	• 7 years (2017–2023) or 84 months • Possible block grant comparison
Number of beneficiaries in outpatient, intensive outpatient, & partial hospitalization SUD treatment per 1,000 members with SUD diagnosis	• 5 years (2017–2021)	• 7 years (2017–2023) or 84 months • Possible block grant comparison

Table A1. Comparison of Interim and Summative Evaluation Analytic Methods (Continued)

Secondary Driver 5 (*Related to Goals 2, 3, and 4*): *Ensure inpatient and residential providers improve care coordination and transition of care to the community*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Common to all Driver 5 measures	Descriptive statistics; YoY; Trend	Descriptive statistics; ITS; Trend
Follow-Up After ED Visit for Alcohol and Other Drug Abuse/Dependence (FUA) – Within 7 days, Within 30 days	• 4 years (2017–2020)	• 6 years (2017–2022)
Follow-Up After High-Intensity Care for SUD (FUI) – Within 7 days, Within 30 days	• 2 years (2019–2020)	• 4years (2019–2022)
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Initiation within 14 days (Total)	• 4 years (2017–2020)	• 6 years (2017–2022)
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET) – Engagement within 34 days (Total)	• 4 years (2017–2020)	• 6 years (2017–2022)
30-Day Readmission for SUD treatment	• 5 years (2017–2021)	• 7 years (2017–2023) • Possible block grant comparison
• ED utilization for SUD per 1,000 Medicaid beneficiaries (CMS Metric #23) • ED utilization for OUD per 1,000 Medicaid beneficiaries (CMS Metric #23, OUD stratum) • Inpatient stays for SUD per 1,000 Medicaid beneficiaries (CMS Metric #24) • Inpatient stays for OUD per 1,000 Medicaid beneficiaries (CMS Metric #24, OUD stratum)	• 5 years (2017–2021)	• 7 years (2017–2023) • Possible block grant comparison
Secondary Driver 6 (*Related to Goals 2, 3, 4, and 5*): *Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Common to all Driver 6 measures	Descriptive statistics; YoY; Trend	Descriptive statistics; ITS; Trend
Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager	• 3 years (2019–2021)	• 5 years (2019–2023)
Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager	• 3 years (2019–2021)	• 5 years (2019–2023)
Other Measures, Goal 3: *Reductions in overdose deaths, particularly those due to opioids*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Common to other measures for Goal 3	Descriptive statistics; YoY; Trend	Descriptive statistics; Trend
Opioid Drug Overdose Deaths. (CMS Metric #27, OUD Stratum)	• 3 years (2019–2021)	• 5 years (2019–2023)
Use of Opioids at High Dosage in Persons without Cancer per 1,000 Medicaid beneficiaries. (CMS Metric #18)	• 2 years (2019–2020)	• 5 years (2019–2023)
Concurrent use of opioids and benzodiazepines per 1,000 Medicaid beneficiaries. (CMS Metric #21)	• 2 years (2019–2020)	• 5 years (2019–2023)
Other Measures, Goal 4: *Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
30-Day Readmission for SUD treatment – OUD discharges	Descriptive statistics; YoY; Trend • 5 years (2017–2021)	Descriptive statistics; ITS; Trend • 7 years (2017–2023)

Table A1. Comparison of Interim and Summative Evaluation Analytic Methods (Continued)

Other Measures, Goal 5: *Improved access to care for physical health conditions among members with OUD or other SUDs*		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
• Annual Dental Visit (ADV) • Adolescent Well-Care Visit (AWC) • Prenatal and Postpartum Care (PPC) – Timeliness of Prenatal Care – Postpartum Care	Descriptive statistics; YoY; Trend; Equality of Relative Improvements (X^2 of hypothesis that intervention and control group had equal relative improvements) • 6 years (2016–2021)	Descriptive statistics; Trend **Omit** planned ITS. **Add** Equality of Relative Improvements with COVID-19 years removed. • 8 years (2016–2023)
Removed from Analytic Plan: Adults' Access to Preventive/Ambulatory Health Services (AAP) (SUD stratum)	SUD and non-SUD identification was related to numerator criteria, so rates were not comparable.	Omit
KanCare 2.0 Section 1115 Demonstration Hypothesis 4: Removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members will result in improved member access to substance use disorder (SUD) treatment services.		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
• Number of IMDs providing SUD services • Number of geographic locations by region for SUD treatment in IMDs • Number of admissions with SUD treatment services in IMDs • Average length of stay for SUD treatment services within IMDs	Descriptive statistics • 3 years (2019–2021)	Descriptive statistics • 5 years (2019–2023)
Treatment costs for members with SUD diagnosis, stratified by types of care using claims data		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
• ED Outpatient SUD Spending • Non-ED Outpatient SUD Spending • Inpatient and Residential SUD Spending • Pharmacy SUD Spending • Total KanCare 2.0 SUD Treatment Spending	Descriptive statistic; Change per year • 5 years (2017–2021)	Descriptive statistic; ITS • 7 years (2017–2023) or 28 quarters
Treatment costs for members, stratified by services rendered within IMDs and other SUD-related costs for members with and without SUD diagnosis		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
• SUD Spending on Inpatient/Residential Services and Pharmaceuticals Within IMDs Non-ED Outpatient SUD Spending • SUD Spending on Services Other Than Within IMDs • SUD Spending on SBIRT Services for Beneficiaries Without SUD Diagnosis • SUD Spending on Assessment Services for Beneficiaries Without SUD Diagnosis (excludes SBIRT) • Total KanCare 2.0 SUD Treatment Spending per Member with SUD Assessment or Diagnosis	Descriptive statistic; Change per year • 3 years (2019–2021)	Descriptive statistic; ITS • 5 years (2019–2023) or 20 quarters
Administrative SUD demonstration costs		
Measures	**Interim Report Analytic Methods**	**Summative Analytic Methods**
Excluded from Interim: • Total administrative costs related to the KanCare 2.0 SUD demonstration SUD spending on services other than within IMDs • Total administrative and SUD service costs related to the KanCare 2.0 SUD demonstration • Total Federal costs related to the KanCare 2.0 SUD demonstration	Costs were being identified.	Descriptive statistic; ITS (subject to data limitations) • 7 years (2017–2023)

Appendix B

KanCare 2.0 Interim Evaluation Report

Evaluation of the State of Kansas Medicaid Section 1115(a) Demonstration Substance Use Disorder

Reporting Period – January 2019 – October 2021

List of Abbreviations and Acronyms

List of Abbreviations and Acronyms	
Abbreviation/Acronym	**Description**
AAP	Adults' Access to Preventive/Ambulatory Health Services
ADV	Annual Dental Visit
ASAM	American Society of Addiction Medicine
AWC	Adolescent Well-Care Visit
BH	Behavioral Health
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare & Medicaid Services
CY	Calendar Year
ED	Emergency Department
EQRO	External Quality Review Organization
FUA	Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence
FUH	Follow-Up After Hospitalization for Mental Illness
FUI	Follow-Up After High-Intensity Care for SUD
HCBS	Home and Community Based Services
HEDIS	Healthcare Effectiveness Data and Information Set
ICD-10-CM	International Classification of Diseases, Tenth Revision, Clinical Modification
IET	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment
IMDs	Institutions for Mental Diseases
ITS	Interrupted Time Series
KDADS	Kansas Department of Aging and Disability Services
KDHE-DHCF	Kansas Department of Health and Environment, Division of Health Care Finance
KFMC	KFMC Health Improvement Partners (the EQRO)
KMAP	Kansas Medical Assistance Program
MAT	Medication Assisted Treatment
MCO	Managed Care Organization
MMIS	Medicaid Management Information System
MY	Measurement Year
NCQA	National Committee for Quality Assurance
NQF	National Quality Forum
OUD	Opioid Use Disorder
PCSP	Person-Centered Service Plan
PH	Physical Health
POD	Continuity of Pharmacotherapy for OUD
PPC	Prenatal and Postpartum Care
QC	Quality Compass

List of Abbreviations and Acronyms	
Abbreviation/Acronym	**Description**
RFR	Reduction in the Failure Rate
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SUD	Substance Use Disorder
SUPPORT Act	Substance Use-Disorder Prevention That Promotes Opioid Recovery and Treatment for Patients and Communities
$PMPM	Dollars per Member per Month

Attachment

KanCare 2.0 Interim Evaluation Report

Evaluation of the State of Kansas Medicaid Section 1115(a) Demonstration Substance Use Disorder

Reporting Period – January 2019 – October 2021

SUD Evaluation Design

KanCare 2.0 Section 1115 Substance Use Disorder Demonstration Evaluation Design

Revised per CMS Feedback

May 22, 2020

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KanCare 2.0 Section 1115 Substance Use Disorder Demonstration Evaluation Design

A. General Background Information

The State of Kansas submitted the KanCare 2.0 Section 1115 Substance Use Disorder (SUD) Demonstration Implementation Plan ("Implementation Plan") to the Centers for Medicare & Medicaid Services (CMS) on June 14, 2019.[1] CMS approved the Implementation Plan on August 20, 2019, for the period of January 1, 2019 through December 31, 2023.[2]

The Implementation Plan is in alignment with the goals and objectives of the state's mandatory Medicaid managed care program: *KanCare*. The Implementation Plan outlines the State's strategy to provide a full continuum of services for SUD treatment to KanCare members. The KanCare program was implemented January 1, 2013, under authority of a waiver through Section 1115 of the Social Security Act. The initial demonstration was approved for five years and CMS approved a one-year extension on October 13, 2017. The State submitted the Section 1115 demonstration renewal application for the KanCare program, titled "KanCare 2.0," in December 2018.[1] CMS approved the renewal of the KanCare 2.0 demonstration for the period of January 1, 2019 through December 31, 2023.[3] KanCare 2.0, an integrated managed care program, serves populations covered by the Kansas Medicaid and Children's Health Insurance Programs (CHIP) through a coordinated approach. KanCare 2.0 is designed to provide efficient and effective health care services and to ensure coordination of care and integration of physical health (PH) and behavioral health (BH) services and Home and Community Based Services (HCBS). KanCare operates concurrently with the State's section 1915(c) HCBS waivers and together provides the authority necessary for the State to require enrollment of almost all Medicaid members (including the aged, people with disabilities, and those with dual Medicare-Medicaid eligibility) across Kansas into a managed care delivery system to receive state plan and waiver services.[3]

KanCare 2.0 provides access to all critical levels of care for SUD and opioid use disorder (OUD).[1,3] The State of Kansas contracts with three statewide managed care organizations (MCOs) to provide access to a range of services across much of the American Society of Addiction Medicine (ASAM) levels of care. The KanCare criteria for treatment are a fidelity-based adaptation of the ASAM Patient Placement Criteria. The Kansas Department for Aging and Disability Services (KDADS) provides required licenses to KanCare-enrolled SUD treatment providers. KanCare 2.0 delivers the outpatient benefits pursuant to the service requirements in the Kansas Medicaid State Plan.[1] The State Plan requires the provision of inpatient and detoxification (withdrawal management) services in State-certified facilities. The spectrum of care – which includes outpatient treatment, peer recovery support, intensive outpatient services, medication-assisted treatment (MAT), intensive inpatient services, withdrawal management, and residential treatment – is provided to eligible Medicaid and CHIP recipients who need SUD or OUD treatment.[1] MCO network providers include specialty providers such as designated women's treatment programs, which offer prenatal services for women and children. KanCare 2.0 requires the provision of person-centered case management, as a one-on-one goal-directed service for individuals with a SUD, to assist individuals in obtaining access to needed family, legal, medical, employment, educational, psychiatric, and other services. For individuals served by an MCO, this service must be a part of the treatment plan developed and determined medically necessary by the MCO.[3] Additionally, KanCare will cover methadone for MAT as required by the SUPPORT Act during the 2020, though coverage was explored in 2019. Through the Implementation Plan, Kansas will amend state licensing standards to include the requirement that all inpatient residential treatment centers, including all those currently excluded as Institutions for Mental Disease (IMDs), provide access to MAT through direct provision or by coordinated referral and treatment initiation to a MAT provider.[1]

CMS's July 2016 regulation (Federal Rule 42 C.F.R. 438.6(e) as amended) prohibits the State from claiming federal financial participation for a monthly payment made by the State to a member's MCO responsible for all care of the member when the member's stay in an IMD is longer than 15 days during any given month. This exclusion causes a loss of Medicaid coverage for members requiring inpatient psychiatric care and limits provider innovation.[3] In its renewal application for KanCare 2.0, the State requested and received approval from CMS for a waiver of the authority to provide coverage under KanCare 2.0 for otherwise-covered services provided to Medicaid-eligible individuals aged 21 through 64 who are enrolled in a Medicaid MCO and who are receiving services in a publicly-owned or non-public IMD.[3,4] This approval will enable the State of Kansas to better address OUD and other SUDs and will assist the SUD program to improve access to high-quality addiction services that are critical to addressing SUD in the state. Under this program, all Medicaid members will continue to have access to all current mental health and SUD benefits. In addition, all members ages 19 through 64 will have access to additional covered services, authorized under section 1115(a)(2) of the Social Security Act, including SUD treatment services provided to individuals with SUD who are short-term residents in residential treatment facilities that meet the definition of an IMD. These services would otherwise be excluded from federal reimbursement due to the statutory restrictions on coverage of services provided in an IMD setting.[3,4]

KanCare 2.0 Section 1115 SUD Demonstration Goals

Kansas will use the 1115 demonstration authority to pursue the following goals to improve access to and quality of treatment for KanCare 2.0 program members with SUD:

1. Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.
2. Reduced utilization of emergency departments (EDs) and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.
3. Reduction in overdose deaths, particularly those due to opioids.
4. Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.
5. Improved access to care for physical health conditions among members with OUD or other SUDs.

B. Evaluation Questions and Hypotheses

KanCare 2.0 Section 1115 SUD Demonstration Driver Diagram

The following driver diagram for the overall SUD demonstration (Figure B-1) shows the relationship between the demonstration's purpose, the primary drivers that contribute directly to achieve the purpose, and the secondary drivers necessary to achieve the primary drivers.

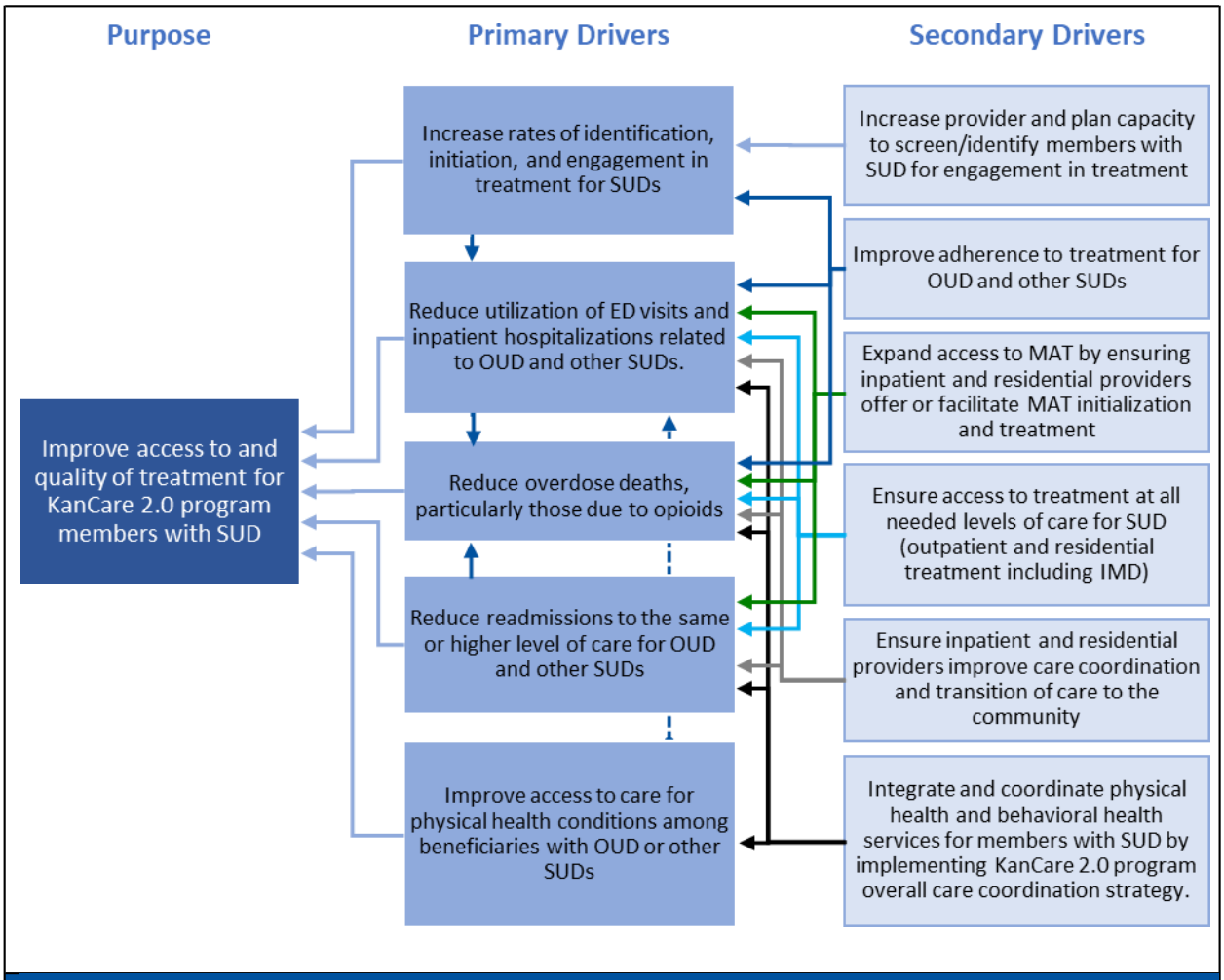

Figure B-1. KanCare 2.0 Section 1115 SUD Demonstration Driver Diagram

KanCare 2.0 Section 1115 SUD Demonstration Goals, Evaluation Questions and Hypotheses

As the focus of the KanCare 2.0 Section 1115 SUD Demonstration evaluation is to examine whether the demonstration achieved its goals, the following proposed evaluation questions are designed in alignment with the five goals and related hypotheses (Table B-1). This evaluation is in accordance with the CMS document, "SUD, Section 1115 Demonstration Evaluation Design, Technical Assistance," provided on March 6, 2019.[5]

Table B-1. KanCare 2.0 Section 1115 SUD Demonstration Goals, Evaluation Questions, and Hypotheses		
Goals	**Evaluation Questions**	**Hypotheses**
1. Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.	1. Does the demonstration increase access to and utilization of SUD treatment services?	1. The demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.
2. Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.	2. Does the demonstration decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population?	2. The demonstration will decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population.
3. Reductions in overdose deaths, particularly those due to opioids.	3. Are rates of opioid-related overdose deaths impacted by the demonstration?	3. The demonstration will decrease the rate of overdose deaths due to opioids.
4. Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.	4. Do enrollees receiving SUD services experience reduction in readmissions to the same or higher level of care for OUD and other SUDs?	4. Among members receiving care for SUD, the demonstration will reduce readmissions to SUD treatment.
5. Improved access to care for physical health conditions among members with OUD or other SUDs.	5. Do enrollees receiving SUD services experience improved access to care for physical health conditions?	5. The demonstration will increase the percentage of members with SUD who access care for physical health conditions.

KanCare 2.0 Demonstration Hypothesis 4 (*associated with SUD Demonstration Evaluation Design Question 1*)

Within the CMS' November 18, 2019 review of the Kansas KanCare 2.0 Section 1115 Demonstration Evaluation Design, CMS noted that removing payment barriers for services provided in IMDs for KanCare members was a strategy in both the KanCare 2.0 Demonstration and SUD Demonstration.[6] To avoid duplicating evaluation for the activity, CMS recommended that the State remove evaluation of Hypothesis 4 and related questions from that evaluation design and address those components within the evaluation of the SUD Demonstration. Thus, the KanCare 2.0 Demonstration Hypothesis 4 has been reproduced within this document (see Table B-2 and Table B-15 and Subsection C.f).

Table B-2. KanCare 2.0 Section 1115 Demonstration Hypothesis 4 and Evaluation Question	
KanCare 2.0 Demonstration Hypothesis 4	**Evaluation Question for KanCare 2.0 Demonstration Hypothesis 4**
Removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members will result in improved member access to substance use disorder (SUD) treatment services.	Did removing payment barriers for services provided in IMDs for KanCare members improve member access to SUD treatment services?

This evaluation question corresponds to the SUD Demonstration Evaluation Question 1, "Does the demonstration increase access to and utilization of SUD treatment services?"

KanCare 2.0 Section 1115 SUD Demonstration Process and Outcome Summary

As shown in the driver diagram for the overall SUD Demonstration (Figure B-1, above), the five *primary drivers* and six *secondary drivers* support the hypotheses for the five evaluation questions to the performance of the SUD Demonstration. An additional question related to KanCare 2.0 Demonstration Hypothesis 4, as a part of the first evaluation question, will also be examined within the SUD Demonstration evaluation. The hypotheses for the five SUD Demonstration evaluation questions, as well as the evaluation question for KanCare 2.0 Demonstration Hypothesis 4, will be assessed according to both processes and outcomes of the SUD Demonstration. Measures which may be investigated for inclusion of comparison groups are noted as 'candidate measures' within Analytic Approach. The SUD Demonstration evaluation questions and hypotheses are matched to their respective drivers and measure details within the following tables:

- Tables B-3 to B-7 provide information on the *outcome evaluation component* of the SUD Demonstration Evaluation Design according to the five primary drivers;
- Tables B-8 to B-14 provide information on the *process evaluation component* of the SUD Demonstration Evaluation Design according to the six secondary drivers; and
- Table B-15 provides information specific to *KanCare 2.0 Demonstration Hypothesis 4*.

Outcome Evaluation – Primary Drivers

Table B-3. Summary of Measures and Analytic Approach for Primary Driver 1 (*Outcome Evaluation*)

Demonstration Goal 1: ***Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.***

Evaluation Question 1: *Does the demonstration increase access to and utilization of SUD treatment services?*

Evaluation Hypothesis 1: *The demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET)	NQF #0004 NCQA	**Initiation:** Members who were diagnosed with a new episode of alcohol or drug dependency during the first 10½ months of the measurement year	**Initiation:** Number of members who began initiation of treatment through an inpatient admission, residential, outpatient visits, intensive outpatient encounter, or partial hospitalization within 14 days of the index episode start date	HEDIS data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET)	NQF #0004 NCQA	**Engagement:** Members who were diagnosed with a new episode of alcohol or drug dependency during the first 10½ months of the measurement year	**Engagement:** Initiation of treatment and two or more engagement events (inpatient admissions, residential, outpatient visits, intensive outpatient encounters or partial hospitalizations) with any alcohol or drug diagnosis within 34 days after the initiation event	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis

Table B-4. Summary of Measures and Analytic Approach for Primary Driver 2 (*Outcome Evaluation*)

Demonstration Goal 2: ***Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.***

Evaluation Question 2: *Does the demonstration decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population?*

Evaluation Hypothesis 2: *The demonstration will decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population.*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
ED utilization for SUD per 1,000 Medicaid beneficiaries (CMS Metric #23)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of ED visits for SUD during the measurement period	MMIS Encounter data from MCOs; State Medicaid Eligibility and Enrollment data	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
ED utilization for OUD per 1,000 Medicaid beneficiaries (CMS Metric #23, OUD stratum)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of ED visits for OUD during the measurement period.	Encounter, eligibility, and enrollment data	Descriptive statistics; ITS design; Trend analysis
Inpatient stays for SUD per 1,000 Medicaid beneficiaries (CMS Metric #24)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of inpatient discharges related to a SUD stay during the measurement period.	Encounter, eligibility, and enrollment data	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*
Inpatient stays for OUD per 1,000 Medicaid beneficiaries (CMS Metric #24, OUD stratum)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of inpatient discharges related to an OUD stay during the measurement period.	Encounter, eligibility, and enrollment data	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*

Table B-5. Summary of Measures and Analytic Approach for Primary Driver 3 (*Outcome Evaluation*)

Demonstration Goal 3: ***Reduction in overdose deaths, particularly those due to opioids.***

Evaluation Question 3: *Are rates of opioid-related overdose deaths impacted by the demonstration?*

Evaluation Hypothesis 3: *The demonstration will decrease the rate of overdose deaths due to opioids.*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Opioid Drug Overdose Deaths. (CMS Metric #27, OUD Stratum)	None	Number of adult beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period.	Number of overdose deaths due to Opioids among eligible beneficiaries	Mortality data (Vital Statistics); State Medicaid Eligibility and Enrollment data	Descriptive statistics; Trend analysis via Mantel-Haenszel (MH) chi-square test or Fisher's Exact test for comparison of percentages for final year (2022) and baseline year (2019).
Use of Opioids at High Dosage in Persons without Cancer per 1,000 Medicaid beneficiaries. (CMS Metric #18)	NQF #2940 (Adult Core Set) PQA NCQA	Number of adult beneficiaries without cancer divided by 1,000. **Note**: Hospice patients will be excluded.	Number of beneficiaries with opioid prescription claims with daily dosage greater than 120 morphine milligram equivalents for 90 consecutive days or longer.	MMIS Encounter data from MCOs; HEDIS data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
Concurrent use of opioids and benzodiazepines per 1,000 Medicaid beneficiaries. (CMS Metric #21)	PQA (Adult Core Set)	Number of adult beneficiaries without cancer divided by 1,000. **Note**: Excludes patients in hospice care and those with cancer.	Number of beneficiaries with concurrent use of prescription opioids and benzodiazepines for at least 30 days	MMIS Encounter data from MCOs	Descriptive statistics; Trend analysis via Mantel-Haenszel (MH) chi-square test or Fisher's Exact test for comparison of percentages for final year (2023) and baseline year (2018).

Table B-6. Summary of Measures and Analytic Approach for Primary Driver 4 (*Outcome Evaluation*)

Demonstration Goal 4: ***Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.***

Evaluation Question 4: *Do enrollees receiving SUD services experience reduction in readmissions to the same or higher level of care for OUD and other SUDs?*

Evaluation Hypothesis 4: *Among members receiving care for SUD, the demonstration will reduce readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
30-Day Readmission for SUD treatment	None	Number of discharges from a residential or inpatient facility for SUD treatment.	Number of discharges with a subsequent admission to a residential or inpatient facility for SUD treatment at the same or higher level of care within 30 days (i.e., inpatient-to-inpatient, inpatient-to-residential, and residential-to-residential)	MMIS Encounter data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2); *candidate for block grant comparison*
30-Day Readmission for SUD treatment (among discharges from a residential or inpatient facility for OUD treatment)	None	Number of discharges from a residential or inpatient facility for OUD treatment.	Number of discharges with a subsequent admission to a residential or inpatient facility for SUD treatment at the same or higher level of care within 30 days (i.e., inpatient-to-inpatient, inpatient-to-residential, and residential-to-residential)	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*

Table B-7. Summary of Measures and Analytic Approach for Primary Driver 5 (*Outcome Evaluation*)

Demonstration Goal 5: ***Improved access to care for physical health conditions among members with OUD or other SUDs.***

Evaluation Hypothesis 5: *The demonstration will increase the percentage of members with SUD who access care for physical health conditions.*

Evaluation Question: *Do enrollees receiving SUD services experience improved access to care for physical health conditions?*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Annual Dental Visits (ADV) (SUD stratum).	NCQA	Eligible beneficiaries 2–20 years of age with SUD diagnosis enrolled in Medicaid	Number of members 2–20 years of age who had one or more dental visits with a dental practitioner during the measurement year.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis
Adults' Access to Preventive/ Ambulatory Health Services (AAP) (SUD stratum).	NCQA	Eligible beneficiaries 20 years and older with SUD diagnosis enrolled in Medicaid	Number of members 20 years and older who had an ambulatory or preventive care visit during the measurement year.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis
Adolescent Well-Care Visits (AWC) (SUD stratum).	NCQA	Eligible beneficiaries 12–21 years of age with SUD diagnosis enrolled in Medicaid	Number of members 12–21 years of age who had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis
Prenatal and Postpartum Care (PPC) – Timeliness of Prenatal Care (SUD stratum).	NCQA	Number of deliveries with live births for eligible members with SUD diagnosis	Number of deliveries that received a prenatal care visit in first trimester, on or before enrollment start date, or within 42 days of enrollment in the organization.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis
Prenatal and Postpartum Care (PPC) – Postpartum Care (SUD stratum).	NCQA	Number of deliveries with live births for eligible members with SUD diagnosis	Number of deliveries that had a postpartum visit on or b/w 7 & 84 days after delivery.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis

Process Evaluation – Secondary Drivers

Table B-8. Summary of Measures and Analytic Approach for Secondary Driver 1 (*Process Evaluation*)

Secondary Driver 1 (*Related to Goal 1*): *Increase provider and plan capacity to screen/ identify members with SUD for engagement in treatment*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Percentage of physical health and behavioral health service providers that billed SBIRT services.	None	The number of distinct performing provider NPIs on claims. Measured on dental, outpatient and professional claims; see policy for provider types.	The number of distinct performing provider NPIs on claims for *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) services	MMIS Encounter data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
Receipt of care for SUD after SBIRT service.	None	Number of beneficiaries who received SBIRT services. (CMS Metric #1)	Number of beneficiaries who received SBIRT services with evidence of SUD service within 60 days after SBIRT service.	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis

Table B-9. Summary of Measures and Analytic Approach for Secondary Driver 2 (*Process Evaluation*)

Secondary Driver 2 (*Related to Goal 1, Goal 2 and Goal 3*): *Improve adherence to treatment for OUD and other SUDs*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Continuity of Pharmacotherapy for OUD (POD) – (CMS Metric #22).	NCQA	Number of beneficiaries age 18 to 64 with an OUD diagnosis (excluding adults initiating pharmacotherapy after 6/30/20 and those deliberately phased out of MAT prior to the 180 days).	Number of beneficiaries with at least 180 days of continuous pharmacotherapy with a medication prescribed for OUD without a gap of more than seven days.	MMIS Encounter data from MCOs; HEDIS data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA).	NCQA	ED visits for members ~~years of~~ age 13 or older with a principal diagnosis of alcohol or other drug abuse (AOD) or dependence in the measurement year.	A follow-up visit with any practitioner after a principal diagnosis of AOD within 7/30 days of the ED visit.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*

* Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12)

Table B-9. Summary of Measures and Analytic Approach for Secondary Driver 2 (*Process Evaluation*) (cont.)					
Secondary Driver 2 (*Related to Goal 1, Goal 2 and Goal 3*): *Improve adherence to treatment for OUD and other SUDs*					
Measure Description	**Steward**	**Denominator**	**Numerator**	**Data Source**	**Analytic Approach**
Percentage of beneficiaries with SUD who used SUD treatment services during the monthly measurement period, stratified by service type.	None	Number of enrollees with a SUD diagnosis (CMS Metric #3).	Number of beneficiaries with a SUD diagnosis who receive any SUD treatment service (CMS Metric #6). Stratified by service type*	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis
Percentage of beneficiaries with OUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type.	None	Number of enrollees with an OUD diagnosis (CMS Metric #3, OUD stratum).	Number of beneficiaries with an OUD diagnosis who receive any SUD treatment service (CMS Metric #6; OUD stratum). Stratified by service type*	MMIS Encounter data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
Percentage of beneficiaries with SUD diagnosis who received peer support services during the monthly measurement period	None	Number of enrollees with a SUD diagnosis (CMS Metric #3).	Number of beneficiaries with a SUD diagnosis who receive peer support service (HCPCTS Codes: H0038, H0038 HQ)	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis
* Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12)					

Table B-10. Summary of Measures and Analytic Approach for Secondary Driver 3 (*Process Evaluation*)					
Secondary Driver 3 (*Related to Goal 2, Goal 3, and Goal 4*): *Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment.*					
Measure Description	**Steward**	**Denominator**	**Numerator**	**Data Source**	**Analytic Approach**
Residential OUD discharges with MAT claim	None	Number of residential discharges for SUD treatment with OUD diagnosis.	Number of denominator discharges with MAT claim during the stay or within 15 days of discharge.	MCO Encounter data from MCOs	Descriptive statistics; Trend analysis via Mantel-Haenszel (MH) chi-square test or Fisher's Exact test for comparison of percentages for final year (2023) and baseline year (2019); *candidate for block grant or rural/urban comparison*
Inpatient OUD discharges with MAT claim	None	Number of inpatient discharges for SUD treatment with OUD diagnosis.	Number of denominator discharges with MAT claim during the stay or within 15 days of discharge.	MCO Encounter data from MCOs	Descriptive statistics; Trend analysis via Mantel-Haenszel (MH) chi-square test or Fisher's Exact test for comparison of percentages for final year (2023) and baseline year (2019); *candidate for block grant or rural/urban comparison*
Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period	None	Number of members with OUD diagnosis (CMS Metric #3, OUD stratum).	Number of members with a claim for MAT for OUD (CMS Metric #12, OUD stratum).	MMIS Encounter data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis via Mantel-Haenszel (MH) chi-square test; *candidate for block grant or rural/urban comparison*

Table B-11. Summary of Measures and Analytic Approach for Secondary Driver 4 (*Process Evaluation*)

Secondary Driver 4 (*Related to Goal 2, Goal 3, and Goal 4*): ***Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD).***

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year.	None	Number of beneficiaries with a SUD diagnosis and a SUD-related service during the measurement period and/or in the 12 months before the measurement period (CMS Metric #4).	Number of beneficiaries with a claim for residential treatment in an IMD (CMS Metric #5).	MMIS Encounter data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2)
Average length of stay for SUD treatment services within IMDs (CMS Metric #36).	None	Total number of discharges from an IMD for beneficiaries with a residential treatment stay for SUD.	Total number of days in an IMD for all beneficiaries with an identified SUD.	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis
Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis	None	Number of beneficiaries with SUD diagnosis divided by 1,000. (CMS Metric #3)	Total number of beneficiaries in residential and inpatient treatment (refer to CMS Metric #10).	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*
Number of beneficiaries in outpatient, intensive outpatient, & partial hospitalization SUD treatment per 1,000 members with SUD diagnosis.	None	Number of beneficiaries with SUD diagnosis divided by 1,000. (CMS Metric #3)	Total number of members in outpatient, intensive outpatient or partial hospitalization treatment (refer to CMS Metrics #8 & #9). **Note**: Partial hospitalization in KS has same service code as inpatient.	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*

Table B-12. Summary of Measures and Analytic Approach for Secondary Driver 5 (*Process Evaluation*)					
Secondary Driver 5 (*Related to Goal 2, Goal 3, and Goal 4*): *Ensure inpatient & residential providers improve care coordination & transition of care to the community.*					
Measure Description	**Steward**	**Denominator**	**Numerator**	**Data Source**	**Analytic Approach**
30-Day Readmission for SUD treatment	None	Number of discharges from a residential or inpatient facility for SUD treatment.	Number of discharges with a subsequent admission to a residential or inpatient facility for SUD treatment at the same or higher level of care within 30 days.	MMIS Encounter data from MCOs	Descriptive statistics; Interrupted Time Series (ITS) design (pre- & post-intervention period comparison); Trend analysis (Mantel-Haenszel X^2) ; *candidate for block grant comparison*
ED utilization for SUD per 1,000 beneficiaries (CMS Metric #23)	None	Beneficiaries enrolled for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of ED visits for SUD during the measurement period	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis
ED utilization for OUD per 1,000 beneficiaries (CMS Metric #23, OUD stratum)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of ED visits for OUD during the measurement period.	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis
Inpatient stays for SUD per 1,000 beneficiaries (CMS Metric #24)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of inpatient discharges related to a SUD stay during the measurement period.	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*
Inpatient stays for OUD per 1,000 beneficiaries (CMS Metric #24, OUD stratum)	None	Beneficiaries enrolled in Medicaid for at least one month (30 consecutive days) during the measurement period divided by 1,000.	Number of inpatient discharges related to an OUD stay during the measurement period.	MMIS Encounter data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*
Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA).	NCQA	ED visits for members 13 years or older with a principal diagnosis of alcohol or other drug abuse (AOD) or dependence in the measurement year.	A follow-up visit with any practitioner after a principal diagnosis of AOD within 7/30 days of the ED visit.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis; *candidate for block grant comparison*

Table B-13. Summary of Measures and Analytic Approach for Secondary Driver 5 (*Process Evaluation*)

Secondary Driver 5 (*Related to Goal 2, Goal 3, and Goal 4*): *Ensure inpatient & residential providers improve care coordination & transition of care to the community*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Follow-Up After High-Intensity Care for SUD (FUI)	NCQA	# of inpatient hospitalizations, residential treatment or detoxification visits for a SUD diagnosis among members age 13 or older	# of visits or discharges that result in a follow-up visit or service for SUD within 7/30 days.	HEDIS data from MCOs	Descriptive statistics; Trend analysis; Differences between final and baseline years (Fisher's Exact or X^2)
Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET)	NQF #0004 NCQA	**Initiation:** See above Table B-3 – Primary Driver, Goal 1. **Engagement:** See Table B-3 – Primary Driver, Goal 1	**Initiation:** See Table B-3– Primary Driver 1. **Engagement:** See Table B-3 – Primary Driver 1.	HEDIS data from MCOs	Descriptive statistics; ITS design; Trend analysis

Table B-14. Summary of Measures and Analytic Approach for Secondary Driver 6 (*Process Evaluation*)

Secondary Driver 6 (*Related to Goal 2, Goal 3, Goal 4, and Goal 5*): *Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy.*

Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager.	None	Number of Medicaid beneficiaries with SUD diagnosis	Number of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager.	MCO case management data (available for 2019 onwards)	Descriptive statistics; Trend analysis (Mantel-Haenszel X^2); Differences between final and baseline years (Fisher's Exact or X^2)
Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have service/treatment plan or person-centered service plan (PCSP).	None	Number of Medicaid beneficiaries with SUD diagnosis.	Number of Medicaid Beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and service/treatment plan or PCSP.	MCO case management data (available for 2019 onwards)	Descriptive statistics; Trend analysis

KanCare 2.0 Section 1115 Demonstration Hypothesis 4 Evaluation

Table B-15. Summary of Measures and Analytic Approach for KanCare 2.0 Section 1115 Demonstration Hypothesis 4

KanCare 2.0 Section 1115 Demonstration Hypothesis 4: ***Removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members will result in improved member access to substance use disorder (SUD) treatment services.***

KanCare 2.0 Hypothesis 4 Evaluation Question: *Did removing payment barriers for services provided in IMDs for KanCare members improve member access to SUD treatment services?*

Performance Measure Description	Steward	Denominator	Numerator	Data Source	Analytic Approach
Number of IMDs providing SUD services.	None	NA	Number of IMDs providing SUD services.	Provider Network reports; MMIS Encounter data; Provider licensing data; MCO utilization reports.	Descriptive statistic (count).
Number of geographic locations by region for SUD treatment in IMDs.	None	NA	Number of geographic locations by Kansas Department for Children and Families (DCF) region for SUD treatment in IMDs.	Network reports, encounter data, licensing data, utilization reports	Descriptive statistic (count).
Number of admissions with SUD treatment services in IMDs.	None	NA	Number of admissions with SUD treatment services in IMDs.	Network reports, encounter data, licensing data, utilization reports	Descriptive statistic (count).
Average length of stay for SUD treatment services within IMDs.	None	NA	Average length of stay for SUD treatment services within IMDs.	Network reports, encounter data, licensing data, utilization reports	Descriptive statistic (average).

Where applicable, measures were developed according to recognized measures from sources such as:

- *1115 Substance Use Disorder Demonstrations: Technical Specifications for Monitoring Metrics* ("CMS Metrics")[7];
- *Adult Core Set* measures including those endorsed by the National Quality Forum (NQF) and stewarded by the National Committee for Quality Assurance (NCQA), and the Pharmacy Quality Alliance (PQA)[8]; and
- *Healthcare Effectiveness Data and Information Set®* (HEDIS) measures.[9]

C. Evaluation Design Methodologies

The evaluation design methodologies are designed to meet the standards of scientific rigor that will assist in obtaining statistically valid and reliable evaluation results. The focus of the evaluation is to examine the effectiveness of demonstration strategies and policies on achievement of the overall goal of helping Medicaid members with SUD to have improved access to and quality of treatment.
The following sections present an overview of methods and rationale for the Demonstration evaluation, followed by sections detailing evaluation questions, evaluation hypotheses, and strategies for each goal of the Demonstration as well as the KanCare 2.0 Program Hypothesis 4 and the overall cost evaluation. See **Attachment 1- Detailed Design Methodology and Limitations** for additional methods discussions.

Evaluation Design Overview

Evaluation of the Demonstration is primarily focused on the subset of KanCare 2.0 members with a SUD diagnosis will be the primary participants ("study population"). In certain cases, members without an

SUD diagnosis may access services (e.g., SBIRT or assessment) and will be included within the target population for certain measures or hypotheses. Due to state-wide implementation of the SUD Demonstration, the evaluation of overall strategies and hypotheses is hindered by the lack of true comparison groups as all KanCare 2.0 members will be eligible for the same benefits. Several potential comparison populations have been identified that may provide additional perspective for certain measures or drivers, such as the Beacon program block grant recipients (external comparison) and an internal comparison of access between rural and urban regions of the state (see Attachment 1). Target and comparison populations for each goal are described within that goal's evaluation methodology, discussed in the sections below.

The difference-in-differences evaluation design was considered for use with identified internal or external comparison populations but was ultimately determined to be infeasible due to lack of comparability of populations (see Attachment 1). To address those limitations, the **Interrupted Time Series** (ITS) and **One-Group Pretest-Posttest** (OGPP) evaluation designs will be used throughout the majority of the evaluation. The evaluation of KanCare 2.0 Hypothesis 4 focuses on increasing availability of IMD facilities providing SUD services following the removal of the Kansas Medicaid IMD Exclusion. Though, due to changes in data systems, pre-demonstration data will not be available. Therefore, non-experimental methods (descriptive statistics) will be used for conducting the evaluation of KanCare 2.0 Hypothesis 4. Specific to cost analyses, the Kansas Medicaid managed care model hinders the ability to investigate costs with the same precision that would be possible in fee-for-service models due to capitation arrangements. Further discussions on how to best evaluate SUD Demonstration costs will be held to determine alternative approaches such as a "shadow pricing" retrospective cost analysis.

Interrupted Time Series (ITS) Evaluation Design

The ITS is performed as a continuous series of measurements on a population based on the variable of interest within a treatment or intervention to determine trends 'interrupted' by application of the treatment or intervention at those times. The quasi-experimental ITS evaluation design was selected for Evaluation Hypothesis 1 and the Demonstration Cost Hypothesis, in their entirety, and for subsets of Evaluation Hypotheses 2 through 5. As shown in Figure C-1, below, the two-year baseline measurements will be for years 2017–2018 and the five-year intervention period will span 2019–2023.

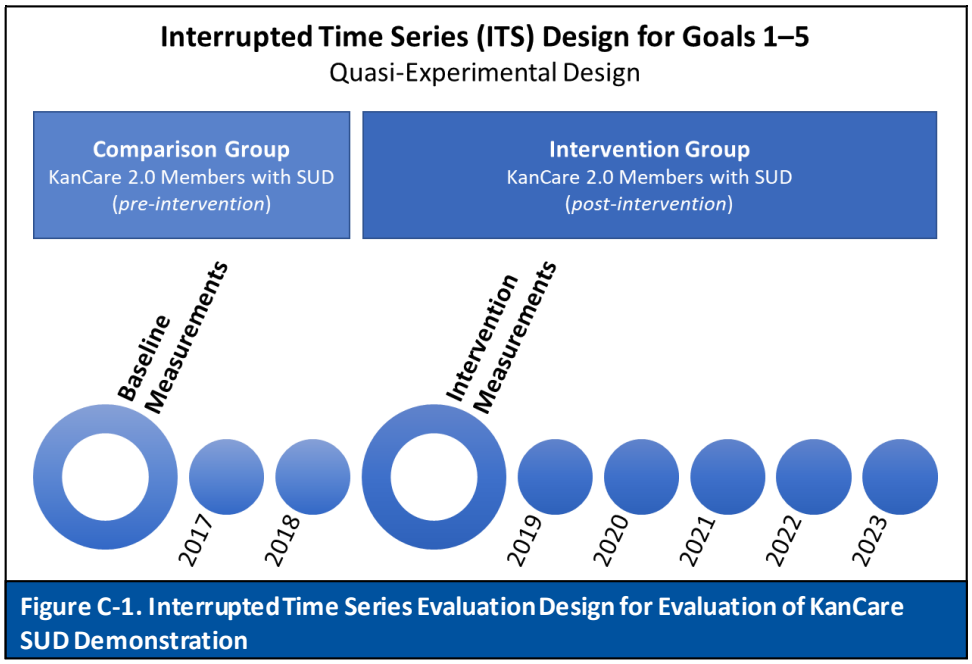

Figure C-1. Interrupted Time Series Evaluation Design for Evaluation of KanCare SUD Demonstration

We will estimate ITS models using the following segmented linear regression equation:

$$Y_t = \beta_0 + \beta_1 T + \beta_2 X_t + \beta_3 T X_t$$

Where Y_t is the outcome at time t, T represents the time elapsed since the start of the program, β_0 represents the baseline (where T=0), X_t is a dummy variable indicating the pre-intervention period, β_1 represents the increment change per time unit before intervention (i.e., baseline trend), β_2 is the level change following the intervention, and β_3 indicates the slope change following the program.

One Group Pretest-Posttest (OGPP) Evaluation Design

As some demonstration strategies are currently in development (subject to State guidelines and approval) and appropriate comparison groups may not be available, the OGPP non-experimental evaluation design will be used. The OGPP is performed for a single population based on the variable of interest within a treatment or intervention with initial (pre-) and subsequent (post-) measurements. Where possible, the quasi-experimental OGPP with non-equivalent comparison groups will be applied with an appropriate comparison group and pre- and post-intervention data. The OGPP evaluation design was selected to examine the evaluation questions for subsets of Hypotheses 2 through 5. As shown in Figure C-2, below, the one-year baseline pretest measurement will be taken from 2019 and the four-year posttest period will span 2020–2023.

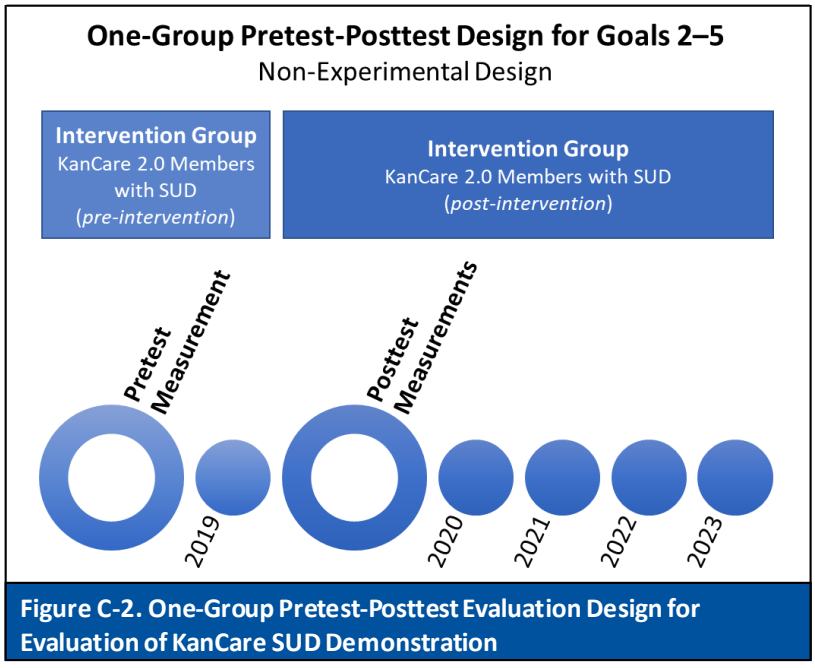

Figure C-2. One-Group Pretest-Posttest Evaluation Design for Evaluation of KanCare SUD Demonstration

a. Evaluation Methodology for SUD Demonstration Goal 1

Demonstration Goal 1

Increased rates of identification, initiation, and engagement in treatment for OUD and other SUDs.

Evaluation Question for Goal 1

Does the demonstration increase access to and utilization of SUD treatment services?

Evaluation Hypothesis for Goal 1

The demonstration will increase the percentage of members who are referred and engaged in treatment for SUDs.

Demonstration Strategies for Goal 1

Two strategies contributing to the primary and secondary drivers for Goal 1 will be implemented over the demonstration period. The strategies include:

- Support the expansion of *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) among physical health and behavioral health service providers to identify members at different risk levels for OUD or other SUDs and provide the appropriate level of referral to SUD providers. This support will be provided by:
  - Increasing training opportunities for the physical health and behavioral health service providers to become credentialed to bill for SBIRT services;
  - Working with the MCOs to expand their network of SBIRT-credentialed providers; and
  - Working with the MCOs to increase the utilization of SBIRT.
- Run a statewide media campaign to increase member and general population awareness of primary prevention and availability of treatment (utilizing funding from the federal State Opioid Response (SOR) grant).

The two strategies described here will contribute to the following two secondary drivers, which in turn will increase the rates of identification, initiation, and engagement in treatment for OUD and other SUDs (Primary Driver 1 for Goal 1):

- Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment (Secondary Driver 1);
- Improve adherence to treatment for OUD and other SUDs (Secondary Driver 1).

Drivers and Performance Measures for Goal 1

The primary and secondary drivers for Goal 1 and their associated performance measures are shown in Table C-1.

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Table C-1. Drivers and Associated Performance Measures for SUD Demonstration Goal 1	
Primary Driver	**Performance Measure**
Increase rates of identification, initiation, and engagement in treatment for SUDs	• Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET). (2017–2022)*
Secondary Drivers	**Performance Measures**
Increase provider and plan capacity to screen/identify members with SUD for engagement in treatment.	• Percentage of physical health and behavioral health service providers that billed *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) services. (2017–2023)* • Receipt of care for SUD and/or OUD after SBIRT service. (2017–2023)*
Improve adherence to treatment for OUD and other SUDs.	• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22). (2017–2023)* • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022)*† • Percentage of beneficiaries with OUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)*^ • Percentage of beneficiaries with SUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023).*^ • Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period.*
* Interrupted Time Series Design will be used for the assessment of the performance measure. ^ Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12) † Candidate measure to investigate feasibility of comparison group (Beacon block grant recipients).	

All eight performance measures will be examined using the interrupted time series design. The post-intervention observation period for six performance measures will be 2019 through 2023. The remaining two performance measures are based on HEDIS data (IET and FUA). HEDIS data for 2022 will be available in the final year of the demonstration period (2023); therefore, the post-intervention observation period for the performance measures based on HEDIS data (IET and FUA) will be 2019 through 2022. The FUA measure may be investigated for feasibility of comparison group analysis (Beacon block grant recipients).

b. Evaluation Methodology for SUD Demonstration Goal 2:

Demonstration Goal 2

Reduced utilization of emergency departments and inpatient hospital settings for OUD and other SUD treatment where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.

Evaluation Question for Goal 2

Does the demonstration decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population?

Evaluation Hypothesis for Goal 2

The demonstration will decrease the rate of emergency department visits and inpatient hospitalizations related to SUD within the member population.

Demonstration Strategies for Goal 2

Four strategies contributing to the Primary and Secondary Drivers for Goal 2 will be implemented over the demonstration period. The strategies include:

- The five Community Crisis Centers (CCCs) across the state became operational in 2019 and provide support and stabilization services for Kansans in crisis and engage with them in community-based services. Early indicators show the Crisis Centers to be effective in diverting members from admission to hospitals and emergency rooms. Groundbreaking on a sixth CCC occurred in late 2019 and it is expected that more CCCs will become operational.
- Expansion of medication-assisted treatment (MAT). This includes:
  - Changing licensing requirements for all residential providers
  - Coverage of methadone maintenance by Medicaid.
- Expand of the use of peer-supported rehabilitation and recovery services ("peer support services"). This includes:
  - Increasing the number of peer mentors credentialed
  - Increasing utilization of peer support services.
- Improve transitions between levels of care related to SUD treatment.

The four strategies described here will contribute to the following five secondary drivers, which in turn will reduce the utilization of preventable or medically inappropriate emergency department visits and inpatient hospital admissions related OUD and other SUD (Primary Driver 2 for Goal 2):

- Improve adherence to treatment for OUD and other SUDs (Secondary Driver 2);
- Expand access to MAT by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment for those who meet the need criteria and choose treatment (Secondary Driver 3);
- Ensure access to services at all needed levels of care for SUD, including outpatient treatment (group, individual, and/or family counseling, community psychiatric support, crisis intervention), residential treatment (including coverage of SUD treatment in IMDs), and peer support services (Secondary Driver 4);
- Ensure inpatient and residential providers improve care coordination and transition of care to the community (Secondary Driver 5); and
- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy (Secondary Driver 6).

Drivers and Performance Measures for Goal 2

The evaluation of this goal involves assessment of twenty-five performance measures for its primary and secondary drivers. Interrupted time series evaluation design will be used to evaluate twenty-two outcome and process measures related to the primary and secondary drivers, whereas one-group pretest–posttest design will be used to examine three process measures related to its secondary drivers. The primary and secondary drivers for Goal 2 and their associated performance measures are shown in Table C-2.

Table C-2. Drivers and Associated Performance Measures for SUD Demonstration Goal 2	
Primary Driver	**Performance Measures**
Reduce utilization of ED visits and inpatient hospitalizations related to OUD and other SUDs.	• ED utilization for SUD per 1,000 Medicaid beneficiaries. (CMS Metric #23; 2017–2023)* • ED utilization for OUD per 1,000 Medicaid beneficiaries. (CMS Metric #23, OUD stratum; 2017–2013)* • Inpatient stays for SUD per 1,000 Medicaid beneficiaries. (CMS Metric #24; 2017–2023)*^ • Inpatient stays for OUD per 1,000 Medicaid beneficiaries. (CMS Metric #24, OUD stratum; 2017–2023)*^
Secondary Drivers	**Performance Measures**
Improve adherence to treatment for OUD and other SUDs.	• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22; 2017–2023)* • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022)*^ • Percentage of beneficiaries with OUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023).*† • Percentage of beneficiaries with SUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)*† • Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period. (2017–2023)*
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment.	• Residential OUD discharges with MAT claim. (2017–2023)^‡ • Inpatient OUD discharges with MAT claim. (2017–2023) ^‡ • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2023)*^
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD).	• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2017–2023)* • Average length of stay for SUD treatment services within IMDs. (CMS Metric #36; 2017–2023)* • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2023)* • Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis.(2017–2023)* **Note**: *Partial hospitalization in KS has same service code as inpatient*.

* Interrupted Time Series Design will be used for the assessment of the performance measure.

^ Candidate measure to investigate feasibility of comparison group (Beacon block grant recipients, rural/urban comparison).

† Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12).

‡ One-group Pretest–Posttest Design will be used for the assessment of the performance measure.

Table C-2. Drivers and Associated Performance Measures for SUD Demonstration Goal 2 (cont.)	
Secondary Driver	**Performance Measures**
Ensure inpatient and residential providers improve care coordination and transition of care to the community.	• 30-Day Readmission for SUD treatment. (2017–2023)*^ • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2023)* • ED utilization for OUD per 1,000 beneficiaries. (CMS Metric #23, OUD stratum; 2017–2023)* • Inpatient stays for SUD per 1,000 beneficiaries. (CMS Metric #24; 2017–2023)*^ • Inpatient stays for OUD per 1,000 beneficiaries. (CMS Metric #24, OUD stratum; 2017–2023)*^ • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2022)*^ • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2022)* • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2022)‡
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy	• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2023)‡ • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have a service/treatment plan or person-centered service plan (PCSP). (2019–2023)‡
* Interrupted Time Series Design will be used for the assessment of the performance measure. ^ Candidate measure to investigate feasibility of comparison group (Beacon block grant recipients, rural/urban comparison). † Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12). ‡ One-group Pretest–Posttest Design will be used for the assessment of the performance measure.	

Twenty-two performance measures will be examined using the interrupted time series design. The post-intervention observation period for nineteen performance measures will be 2019 through 2023. The remaining three performance measures are based on HEDIS data (FUA and IET). HEDIS data for 2022 will be available in the final year of the demonstration period (2023); therefore, the post-intervention observation period for the performance measures based on HEDIS data (FUA and IET) will be 2019 through 2022.

Three process measures will be examined using the one group pretest–posttest design. The post-intervention observation period for two performance measures will be 2019 through 2023. The remaining one performance measure is based on HEDIS data (FUI). HEDIS data for 2022 will be available in the final year of the demonstration period (2023); therefore, the post-intervention observation period for this performance measure (FUI) will be 2019 through 2022.

Several measures may be investigated for feasibility of comparison group analysis such as readmission and inpatient stays (Beacon block grant recipients) and MAT claim measures (Beacon recipients and rural/urban comparisons).

c. Evaluation Methodology for SUD Demonstration Goal 3:

Demonstration Goal 3

Reduction in overdose deaths, particularly those due to opioids.

Evaluation Question for Goal 3

Are rates of opioid-related overdose deaths impacted by the demonstration?

Evaluation Hypothesis for Goal 3

The demonstration will decrease the rate of overdose deaths due to opioids.

Demonstration Strategies for Goal 3

Two strategies contributing to the primary and secondary drivers for Goal 3 will be implemented over the demonstration. The strategies include:

- Expansion of medication-assisted treatment (MAT). This includes:
  - Changing licensing requirements for all residential providers; and
  - Coverage of methadone maintenance by Medicaid.
- Care coordination requirements by the MCOs to improve transitions to the community and participation in community-based recovery services.

These two strategies will contribute to the following three secondary drivers, which in turn will lead to the reduction in overdose deaths, particularly those due to opioids (Primary Driver 3 for Goal 3):

- Improve adherence to treatment for OUD and other SUDs (Secondary Driver 2);
- Expand access to MAT by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment for those who meet the need criteria and choose treatment (Secondary Driver 3);
- Ensure inpatient and residential providers improve care coordination and transition of care to the community (Secondary Driver 5).

In addition to the above-mentioned secondary drivers and strategies, the following secondary drivers and their related strategies (described for Goal 2) will also contribute in achieving the Goal 3.

- Ensure access to services at all needed levels of care for SUD, including outpatient treatment (group, individual, and/or family counseling, community psychiatric support, crisis intervention), residential treatment (including coverage of SUD treatment in IMDs), and peer support services (Secondary Driver 3);
- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy (Secondary Driver 5).

Drivers and Performance Measures for Goal 3

The evaluation of this goal involves assessment of eighteen performance measures for its primary and secondary drivers. Interrupted time series evaluation design will be used to evaluate fifteen outcome and process measures related to the primary and secondary drivers, whereas the one-group pretest–posttest design will be used to examine three outcome and process measures related to Goal 3's primary and secondary drivers. The primary and secondary drivers for Goal 3 and their associated performance measures are shown in Table C-3.

Table C-3. Drivers and Associated Performance Measures for SUD Demonstration Goal 3	
Primary Driver	**Performance Measures**
Reduce overdose deaths, especially those due to opioids.	• Opioid Drug Overdose Deaths. (CMS Metric #27, OUD Stratum; 2019–2022)* • Use of Opioids at High Dosage in Persons without Cancer. (CMS Metric #18; 2017–2023)^ • Concurrent Use of Opioids and Benzodiazepines. (CMS Metric #21; 2018–2023)*
Secondary Drivers	**Performance Measures**
Improve adherence to treatment for OUD and other SUDs.	• Continuity of Pharmacotherapy for OUD (POD). (CMS Metric #22; 2017–2023)^ • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022)^† • Percentage of beneficiaries with OUD diagnosis who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)^‡ • Percentage of beneficiaries with SUD who used SUD treatment services during the monthly measurement period, stratified by service type. (2017–2023)^‡ • Percentage of beneficiaries with SUD diagnosis who used SUD peer support services during the monthly measurement period. (2017–2023)^
Expand access to medication-assisted treatment (MAT) by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment.	• Residential OUD discharges with MAT claim. (2017–2023)^† • Inpatient OUD discharges with MAT claim. (2017–2023)^† • Percentage of members with OUD diagnosis who have a MAT claim for OUD during the measurement period. (2017–2023)^†
Ensure inpatient and residential providers improve care coordination and transition of care to the community.	• 30-Day Readmission for SUD treatment. (2017–2023)^† • ED utilization for SUD per 1,000 beneficiaries (CMS Metric #23). (2017–2023)^ • ED utilization for OUD per 1,000 beneficiaries (CMS Metric #23, OUD stratum; 2017–2023)^ • Inpatient stays for SUD per 1,000 beneficiaries (CMS Metric #24; 2017–2023)^† • Inpatient stays for OUD per 1,000 beneficiaries (CMS Metric #24, OUD stratum; 2017–2023)^† • Follow-Up After ED Visit for Alcohol and Other Drug Abuse or Dependence (FUA). (2017–2022)^† • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2022)^ • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2022)*
* One-group pretest–posttest design will be used for the assessment of the performance measure. ^ Interrupted time series design will be used for the assessment of the performance measure. † Candidate measure to investigate feasibility of comparison group (Beacon block grant recipients, rural/urban comparison). ‡ Service Type Strata: *early intervention*, e.g., SBIRT (CMS Metric #7); *outpatient services* (CMS Metric #8); *intensive outpatient and partial hospitalization* (CMS Metric #9); *residential and inpatient services* (CMS Metric #10); *withdrawal management* (CMS Metric #11); *medication-assisted treatment (MAT)* (CMS Metric #12).	

Fifteen performance measures will be examined using the interrupted time series design. The post-intervention observation period for twelve performance measures will be 2019 through 2023. The post-intervention period for three performance measures are based on HEDIS data. Since HEDIS data for 2023 is not expected to be available for analysis, the post-intervention observation period for the

performance measures based on HEDIS data will be 2019 through 2022.
Three outcome measures will be examined using the one-group pretest–posttest design. The evaluation periods will vary by measure, as discussed below.

The baseline observation period for the Concurrent Use of Opioids and Benzodiazepines measure will be 2018; the post-intervention data points will be 2019 through 2023.

The Opioid Drug Overdose Deaths measure of overdose deaths due to any opioid is related to the primary driver of this goal. Currently, KDHE is in the process of developing a warehouse, "HealtheIntent Data Warehouse," to link birth and death data to Medicaid members. The development of this warehouse will assist in death-Medicaid data linking. This system will be used to provide data for calculating the rates of overdose deaths due to any opioid. It is anticipated that these data will be available for 2019 through 2022 for analysis; therefore, the one-group pretest–posttest evaluation design will be used. If this system can provide opioid overdose death data for the years 2017 and 2018, then the interrupted time series design will be applied to examine this measure.

Follow-Up After High-Intensity Care for SUD (FUI) became a HEDIS measure starting with measurement year 2019. Since HEDIS data for 2023 may not be available for analysis, the pre-intervention year for FUI will be 2019, and the post-intervention period will be 2020 through 2022.

Several measures may be investigated for feasibility of comparison group analysis such as readmission and inpatient stays (Beacon block grant recipients) and MAT claim measures (Beacon recipients and rural/urban comparisons).

d. Evaluation Methodology for SUD Demonstration Goal 4

Demonstration Goal 4

Fewer readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.

Evaluation Question for Goal 4

Do enrollees receiving SUD services experience reduction in readmissions to the same or higher level of care for OUD and other SUDs?

Evaluation Hypothesis for Goal 4

Among members receiving care for SUD, the demonstration will reduce readmissions to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.

Demonstration Strategy for Goal 4

Two strategies contributing to the primary and secondary drivers for Goal 4 will be implemented over the demonstration period. The strategies include:

- To ensure admission of members with SUD to the appropriate level of care, documentation of an assessment which follows ASAM criteria will be required.
  - Licensing standards for all providers across the network will be aligned with the ASAM criteria.
- Care coordination requirements will aim to decrease readmission to the same or higher level of care where readmissions are preventable or medically inappropriate for OUD and other SUDs.

The two strategies described here will contribute to the following two secondary drivers, which in turn will lead to the reduced readmissions to the same or higher level of care for OUD and other SUDs (primary driver for Goal 4):

- Ensure access to services at all needed levels of care for SUD, including outpatient treatment (group, individual, and/or family counseling, community psychiatric support, crisis intervention), residential treatment (including coverage of SUD treatment in IMDs), and peer support services;
- Ensure inpatient and residential providers improve care coordination and transition of care to the community;

In addition to the above-mentioned secondary drivers and strategies, the following secondary drivers and their related strategies (described for Goal 2) will also contribute in achieving Goal 4.

- Expand access to MAT by ensuring inpatient and residential providers offer or facilitate MAT initialization and treatment for those who meet the need criteria and choose treatment.
- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy.

Drivers and Performance Measures for Goal 4

The evaluation of this goal involves assessment of fourteen performance measures for its primary and secondary drivers. Interrupted time series evaluation design will be used to evaluate thirteen performance measures related to the primary and secondary drivers, whereas the one-group pretest–posttest design will be used to examine one performance measure related to one of its secondary drivers. The primary and secondary drivers for Goal 4 and their associated performance measures are shown in Table C-4.

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Table C-4. Drivers and Associated Performance Measures for SUD Demonstration Goal 4	
Primary Driver	**Performance Measure**
Reduce readmissions to the same or higher level of care for OUD and other SUDs.	• 30-Day Readmission for SUD treatment. (2017–2013)*^ • 30-Day Readmission for SUD treatment (among discharges from a residential or inpatient facility for OUD treatment). (2017–2023)*^
Secondary Drivers	**Performance Measures**
Ensure access to treatment at all needed levels of care for SUD (outpatient and residential treatment including IMD).	• Percentage of Medicaid beneficiaries with SUD diagnosis who were treated in an IMD for SUD during the measurement year. (2017–2023)* • Average length of stay for SUD treatment services within IMDs (CMS Metric #36; 2017–2023)* • Number of beneficiaries in residential and inpatient treatment for SUD per 1,000 members with SUD diagnosis. (2017–2023)* • Number of outpatient, intensive outpatient, & partial hospitalization days of SUD treatment per 1,000 members with SUD diagnosis. (2017–2023)* **Note**: *Partial hospitalization in KS has same service code as inpatient.*
Ensure inpatient and residential providers improve care coordination and transition of care to the community.	• 30-Day Readmission for SUD treatment. (2017–2023)*^ • ED utilization for SUD per 1,000 beneficiaries. (CMS Metric #23; 2017–2023)* • ED utilization for OUD per 1,000 beneficiaries (CMS Metric #23, OUD stratum; 2017–2023)* • Inpatient stays for SUD per 1,000 beneficiaries (CMS Metric #24; 2017–2023)*^ • Inpatient stays for OUD per 1,000 beneficiaries (CMS Metric #24, OUD stratum; 2017–2023)*^ • Follow-Up After ED Visit for Alcohol and Other Drug Abuse/ Dependence (FUA). (2017–2022)*^ • Initiation & Engagement of Alcohol & Other Drug Dependence Treatment (IET). (2017–2022)* • Follow-Up After High-Intensity Care for SUD (FUI). (2019–2022)†
* Interrupted Time Series Design will be used for the assessment of the performance measure. ^ Candidate measure to investigate feasibility of comparison group (Beacon block grant recipients, rural/urban comparison). † One-group Pretest–Posttest Design will be used for the assessment of the performance measure.	

Thirteen performance measures will be examined using the interrupted time series design. The post-intervention observation period for eleven performance measures will be 2019 through 2023. The remaining two performance measures are based on HEDIS data (FUA and IET). As 2022 HEDIS data will be available in the final year of the demonstration period (2023), therefore, the post-intervention observation period for the performance measures based on HEDIS data (FUA and IET) will be 2019 through 2022.

One performance measure will be examined using the one-group pretest–posttest design. The post-intervention observation period for this performance measure will be 2019 through 2022. The performance measure with data availability for 2019 through 2022 is based on HEDIS data (FUI). HEDIS data for 2022 will be available in the final year of the demonstration period (2023); therefore, the post-intervention observation period for this performance measure (FUI) will be 2019 through 2022.

Several measures may be investigated for feasibility of comparison group analysis such as readmission and inpatient stays (Beacon block grant recipients).

e. Evaluation Methodology for SUD Demonstration Goal 5

Demonstration Goal 5

Improved access to care for physical health conditions among beneficiaries with OUD or other SUDs.

Evaluation Question for Goal 5

Do enrollees receiving SUD services experience improved access to care for physical health conditions?

Evaluation Hypothesis for Goal 5

The demonstration will increase the percentage of beneficiaries with SUD who access care for physical health conditions.

Demonstration Strategy for Goal 5

The **strategy** contributing to the primary and secondary drivers for Goal 5 will be implemented over the demonstration period. The strategy includes:

- KanCare 2.0 contracts with MCOs will focus on the integration of behavioral health and physical health among members with SUDs.
    - Care coordination includes health screening, health risk assessment, needs assessment, and development and implementation of service/treatment plan or person-centered service plan (PCSP).

The strategy described here will contribute to the following secondary driver, which in turn will lead to improved access to care for physical health conditions among members with OUD or other SUDs (primary driver for Goal 5):

- Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy.

Drivers and Performance Measures for Goal 5

The evaluation of this goal involves assessment of six performance measures for its primary and secondary drivers. Interrupted time series evaluation design will be used to evaluate five performance measures related to the primary and secondary drivers, whereas the one-group pretest–posttest design will be used to examine two performance measure related to its secondary driver. The primary and secondary drivers for Goal 3 and their associated performance measures are shown in Table C-5.

Table C-5. Primary Driver and Associated Performance Measures for SUD Demonstration Goal 5	
Primary Driver	**Performance Measures**
Improve access to care for physical health conditions among members with OUD or other SUDs.	• Annual Dental Visits (ADV). (SUD stratum; 2017–2022)* • Adults' Access to Preventive/Ambulatory Health Services (AAP). (SUD stratum; 2017–2022)* • Adolescent Well-Care Visits (AWC). (SUD stratum; 2017–2022)* • Prenatal and Postpartum Care (PPC). (SUD stratum; 2017–2022)*
Secondary Driver	**Performance Measure**
Integrate and coordinate physical health and behavioral health services for members with SUD by implementing KanCare 2.0 program overall care coordination strategy.	• Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager (2019–2023)^ • Percentage of Medicaid beneficiaries with SUD diagnosis who have an assigned MCO Care Manager and have Service/Treatment plan or PCSP. (2019–2023)^
* Interrupted Time Series Design will be used for the assessment of the performance measure. ^ One-group Pretest–Posttest Design will be used for the assessment of the performance measure. † Care Coordination Includes: *health screening, health risk assessment, needs assessment and development and implementation of service/treatment plan or person-centered service plan (PCSP)*	

Four performance measures will be examined using the interrupted time series design. Each of the four performance measures are based on HEDIS data (ADV, AAP, AWC, and PPC). HEDIS data for 2022 will be available in the final year of the demonstration period (2023); therefore, the post-intervention observation period for the performance measures based on HEDIS data (ADV, AAP, AWC, and PPC) will be 2019 through 2022.

Two performance measure will be examined using the one-group pretest–posttest design. The post-intervention observation period for this performance measure will be 2019 through 2023.

f. Methodology for the Evaluation of KanCare 2.0 Hypothesis 4

KanCare 2.0 Hypothesis 4 Evaluation Question

Did removing payment barriers for services provided in Institutions for Mental Diseases (IMDs) for KanCare members improve member access to substance use disorder (SUD) treatment services.?

This question corresponds to the SUD Demonstration Evaluation Question 1, "Does the demonstration increase access to and utilization of SUD treatment services?"

KanCare 2.0 Hypothesis 4

Removing payment barriers for services provided in IMDs for KanCare members will result in improved member access to SUD treatment services.

Demonstration Strategy for KanCare 2.0 Hypothesis 4

The Kansas Medicaid IMD Exclusion has been removed allowing IMDs to bill for SUD treatment services with the expectation that access to SUD services will increase for members with behavioral health conditions.

Evaluation Design for KanCare 2.0 Hypothesis 4

Non-experimental methods (descriptive data) will be used for assessing the evaluation question. Due to changes in data systems, pre-demonstration data will not be used.

Target and Comparison Population

The evaluation for this hypothesis will focus on increasing the availability of IMD facilities providing SUD treatment services over the five-year period. **No intervention and comparison groups will be examined**.

Evaluation Period

2019–2023 will be the evaluation period.

Evaluation Measures for KanCare 2.0 Hypothesis 4

- Number of IMDs providing SUD services
- Number of geographic locations of IMDs providing SUD services (by region/county)
- Number of admissions with SUD treatment services in IMDs
- Average length of stay for SUD treatment services within IMDs

g. Methodology for the Evaluation of Cross-Cutting Cost Measures

The investigation of costs for the KanCare 2.0 SUD Demonstration is a separate but cross-cutting element of the demonstration evaluation. Cost studies investigate both granular (i.e., specific treatment costs) and macro aspects of the KanCare program unique to the SUD demonstration. The SUD demonstration is designed to maintain budget neutrality while improving the effectiveness of services delivered to the Medicaid population. The intent of cost studies is not to identify statistically significant increases or decreases in program costs but to understand how spending within different categories may contribute to enhanced program effectiveness. This is, in large part, due to how Medicaid managed care capitation payments obscure true administrative spending versus a fee-for-service paradigm.

Goal for Costs of SUD Demonstration

Improved impact of the KanCare 2.0 program via provision of a full continuum of services for SUD treatment to members.

Evaluation Question for Demonstration Cost

Does the SUD demonstration maintain or decrease total KanCare 2.0 SUD expenditures?

Evaluation Hypothesis for Demonstration Cost

The SUD demonstration will maintain or decrease total KanCare 2.0 SUD expenditures.

Demonstration Strategy for Demonstration Cost

Each of the strategies within the Evaluation Design Methodology, that support the primary and secondary drivers, are also utilized in the investigation of program costs. The outcomes of these strategies are anticipated to contribute to enhanced program efficiency and effectiveness. Enhancements to efficiency may include reductions to admissions (or readmissions) and other burdens related to treatment of preventable or medically inappropriate encounters as well as any other outcomes which reduce unnecessary utilization or duplication of efforts. This may also shift costs associated with the transition from formal treatment to community recovery services. See subsections C.a through C.e for detailed discussion on evaluation strategies.

Evaluation Measures for Demonstration Cost

The SUD demonstration cost measures are stratified into three interrelated cost categories, each expressed in terms of dollars per member per month ($PMPM):

- **Type of Care Cost Drivers (*Table C-6*)**: treatment costs for members with SUD diagnosis, stratified by types of care using claims data;

- **SUD Cost Drivers (*Table C-7*)**: treatment costs for members, stratified by services rendered within IMDs and other SUD-related costs for members with and without SUD diagnosis; and
- **Total KanCare 2.0 SUD Demonstration Costs (*Table C-8*)**: treatment costs from the cost drivers listed above as well as administrative costs associated with the demonstration.

Table C-6. Type of Care Cost Drivers

Measure Description	Numerator and Denominator Specification
ED Outpatient SUD spending during the measurement period. Expressed in dollars per member per month ($PMPM).	**Numerator**: Spending on SUD treatment services in emergency department (ED) outpatient settings during the measurement period (CMS Metric #28, outpatient ED stratum)
	Denominator: Number of beneficiaries with a SUD diagnosis and a SUD treatment during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, outpatient non-ED stratum)
Non-ED Outpatient SUD spending during the measurement period. ($PMPM)	**Numerator**: Spending on SUD treatment services and peer support in non-ED outpatient settings during the measurement period. (CMS Metric #28, outpatient stratum)
	Denominator: Number of beneficiaries with a SUD diagnosis and a SUD treatment or peer support service during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, outpatient stratum)
Inpatient and residential SUD spending during the measurement period. ($PMPM)	**Numerator**: Spending on SUD treatment services in inpatient and residential settings during the measurement period. (CMS Metric #28, inpatient stratum)
	Denominator: Number of beneficiaries with a SUD diagnosis and a SUD treatment during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, inpatient stratum)
Pharmacy SUD spending during the measurement period. ($PMPM)	**Numerator**: Spending on SUD pharmaceuticals during the measurement period. (CMS Metric #28, pharmaceutical stratum)
	Denominator: Number of beneficiaries with a SUD diagnosis and a SUD treatment during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, pharmaceutical stratum)
Total KanCare 2.0 SUD treatment spending on beneficiaries with SUD diagnosis during the measurement period. ($PMPM)	**Numerator**: The sum of all Medicaid spending on SUD treatment and peer support services during the measurement period. (CMS Metric #28)
	Denominator: Number of beneficiaries with a SUD diagnosis and a SUD treatment or peer support service during the measurement period and/or in the 12 months before the measurement period. (*paid claims, only*; CMS Metric #4)

Note: Long-term care services are included within institutional claims and may be stratified from the Total.

Table C-7. SUD Cost Drivers	
Measure Description	**Numerator and Denominator Specification**
SUD spending on inpatient/residential services and pharmaceuticals within IMDs during the measurement period. Expressed in dollars per member per month ($PMPM). [CMS Metric #31]	**Numerator**: Spending on treatment or peer support for SUD within IMDs during the measurement period. (exclude room & board; CMS Metric #29)
	Denominator: Number of beneficiaries with a claim for treatment or peer support for SUD in an IMD during the reporting year. (paid service or pharmacy claims, only; CMS Metric #5)
SUD spending on services other than within IMDs during the measurement period. ($PMPM) [CMS Metric #30]	**Numerator**: Spending on SUD treatment or peer support services *not within IMDs* during the measurement period. (CMS Metric #28, non-IMD stratum)
	Denominator: Number of beneficiaries with a SUD diagnosis and a SUD treatment or peer support during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, non-IMD stratum)
SUD spending on SBIRT services for beneficiaries without SUD diagnosis during the measurement period. ($PMPM)	**Numerator**: Spending on SUD *Screening, Brief Intervention, and Referral to Treatment* (SBIRT) for beneficiaries *without a SUD diagnosis and not within IMDs* during the measurement period. (CMS Metric #28, non-IMD and non-SUD diagnosis strata)
	Denominator: Number of beneficiaries without SUD diagnosis but with a SUD treatment during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, non-IMD stratum)
SUD spending on assessment services for beneficiaries without SUD diagnosis during the measurement period. ($PMPM)	**Numerator**: Spending on SUD assessment for beneficiaries *without a SUD diagnosis and not within IMDs* during the measurement period. (CMS Metric #28, non-IMD and non-SUD diagnosis strata)
	Denominator: Number of beneficiaries without SUD diagnosis but with a SUD treatment during the measurement period and/or in the 12 months before the measurement period. (paid claims, only; CMS Metric #4, non-IMD stratum)
Total KanCare 2.0 SUD treatment spending during the measurement period. ($PMPM)	**Numerator**: The sum of all Medicaid spending on SUD treatment, SBIRT, assessment, and peer support services during the measurement period. (CMS Metric #28, includes non-SUD diagnosis stratum)
	Denominator: Number of beneficiaries who received SUD treatment, SBIRT, assessment, or peer support services during the measurement period and/or in the 12 months before the measurement period. (*paid claims, only;* CMS Metric #4, includes non-SUD diagnosis stratum)

Table C-8. Total KanCare 2.0 SUD Demonstration Costs	
Measure Description	**Numerator and Denominator Specification**
Total administrative costs related to the KanCare 2.0 SUD demonstration. Expressed in dollars per member per month ($PMPM).	**Numerator**: Sum of all administrative costs related to the SUD demonstration.
	Denominator: Number of beneficiaries who received SUD treatment, SBIRT, assessment, or peer support services during the measurement period and/or in the 12 months before the measurement period. (*paid claims, only;* CMS Metric #4, includes non-SUD diagnosis stratum)
Total administrative and SUD service costs related to the KanCare 2.0 SUD demonstration. ($PMPM)	**Numerator**: The sum of 1) all administrative costs related to the SUD demonstration and 2) all Medicaid spending on SUD treatment, SBIRT, assessment, and peer support services during the measurement period. (includes non-SUD diagnosis stratum).
	Denominator: Number of beneficiaries who received SUD treatment, SBIRT, assessment, or peer support services during the measurement period and/or in the 12 months before the measurement period. (*paid claims, only;* CMS Metric #4, includes non-SUD diagnosis stratum)
Total Federal costs related to the KanCare 2.0 SUD demonstration. ($PMPM)	**Numerator**: The Federal Medical Assistance Percentage (FMAP) multiplied by the sum of 1) all administrative costs related to the SUD demonstration and 2) all Medicaid spending on SUD treatment, SBIRT, assessment, and peer support services during the measurement period. (includes non-SUD diagnosis stratum).
	Denominator: Number of beneficiaries who received SUD treatment, SBIRT, assessment, or peer support services during the measurement period and/or in the 12 months before the measurement period. (*paid claims, only;* CMS Metric #4, includes non-SUD diagnosis stratum)

Evaluation Design for Demonstration Cost

Interrupted time series evaluation design will be used to examine the evaluation question for all measures. This approach will not include a comparison group but will demonstrate trends unique to the SUD demonstration as costs per member per month ($PMPM).

To conduct interrupted time series analysis, the design will compare nine cost measures during pre- and post-intervention periods; these cost measures are also aggregated into four total measures across the three cost categories. The pre- and post-intervention comparisons will examine whether the pre-post intervention change shows a statistically significant shift in level or trend of demonstration costs. Though interrupted time series models without a comparison group cannot adequately determine whether any observed changes are associated with the demonstration, the cost measures will be used to track overall expenditures. If deemed appropriate, "shadow pricing" methods may be used to determine fee-for-service costs as a retrospective comparison.

Target and Comparison Population

Study Population: The study population for the cost measures will include those that support understanding both total health care spending and costs of individual member services:

- KanCare 2.0 members (*primarily those with SUD diagnosis*);
- State of Kansas administrative agencies overseeing KanCare 2.0 program (*KDHE, KDADS*);
- KanCare 2.0 MCOs (*Aetna Better Health, Amerigroup Kansas*, Sunflower State Health Plan, UnitedHealthcare*); and
- KanCare 2.0 in-network providers.

*Amerigroup Kansas, Inc. data may be used for calculations related to pre-intervention costs.

Comparison Population: Financial information for the Beacon program block grant recipients may be

available at sufficient detail to perform Demonstration cost comparisons for measures eligible for comparison group analysis.

Evaluation Period

The total evaluation period will be 2017 through 2023. The pre- and post-intervention periods for the Interrupted Time Series analysis will be as follows:
Pre-Intervention Period: 2017–2018;
Post-Intervention Period: 2019–2023.

Analytic Plan for Demonstration Cost

A general regression model will be developed for this analysis. Demonstration costs will be transformed to log costs to account for wide variation in spending across months. The final regression model will include covariates to control for confounding factors such as member demographics (including Medicare-Medicaid dual eligibility), geographic location of treatment, comorbid diagnoses, etc.

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D. Attachments

1. Detailed Design Methodology and Limitations

Study, Target and Comparison Populations

Due to state-wide implementation of the SUD Demonstration, the evaluation of overall strategies and hypotheses is hindered by the lack of true comparison groups as all KanCare 2.0 members will be eligible for the same benefits. The subset of KanCare 2.0 members with a SUD diagnosis will be the primary participants ("study population") in the Demonstration. It is also expected that for certain measures members without such diagnosis may receive SBIRT or assessment and will be included in the denominator of performance measures and costs within cost measures. Target populations for each intervention, hypothesis, and measure are specified when they differ from the study population (e.g., metric technical specifications). Target and any comparison populations for each goal are described within that goal's evaluation methodology, discussed in Section C.

Because of the lack of comparability, evaluation designs generally included comparisons among members in both intervention and comparison groups and a lack of true external comparison groups limits options for evaluation design. Based on CMS feedback, the design team considered multiple internal and external comparison groups, including utilizing an out-of-state comparison group.[10] The next subsections discuss selected internal and external comparison populations that may provide additional perspective for certain measures or drivers.

External Comparison Population – Administrative Services Organization (ASO) Individuals

A potential external comparison population for the Demonstration are block grant recipients within the Beacon program. The ASO program covers SUD treatment for recipients and providers used by recipients would provide the same services or treatments as they would Medicaid beneficiaries. Aggregate data made available in "Provider Report Cards" from the State Quality Committee of the Behavioral Health Services Planning Council may be compared to the KanCare 2.0 study population for certain measures such as seven-day and thirty-day readmissions, length of stay in treatment, follow-up to services, and MAT access (assumed to have reduced access for ASO individuals). A critical limitation in comparison to target and study populations is that the block grant recipient demographics differ greatly: recipients are uninsured, mostly male, and would not have similar access to services or care coordination. In the event Kansas moves forward with Medicaid expansion, these individuals would likely be included in the expansion gap and may no longer be a valid comparison group but may become an intervention subgroup. The block grant population will be investigated for their potential to serve as comparison groups for select readmission, length of stay, follow-up to services, and MAT measures.

Internal Comparison Population – Geographic Locations of Members and Services

Potential internal comparison populations for the Demonstration may fall along the Kansas population density spectrum (frontier-to-urban) or location of services as availability and access will likely differ by location in Kansas. For example, methadone treatment requires daily (or near daily) clinic visits but methadone clinics may not be accessible in regions of lower population density. Kansas counties are designated to different population density peer groups according to their population relative to their size in persons per square mile (ppsm): Frontier (less than 6.0 ppsm), Rural (6.0 - 19.9 ppsm), Densely-settled Rural (20.0 - 39.9 ppsm), Semi-Urban (40.0 - 149.9 ppsm), and Urban (150.0 ppsm or more).[11] Another potential comparison could be comparing services or providers in different geographic locations, such as comparison between different urban areas offering methadone clinics and likelihood of accepting Medicaid. Non-urban regions will be investigated for their potential to serve as comparison groups to urban regions for select MAT measures.

Data Sources

The following data sources will be utilized for the Demonstration (see Table D-1, below). The majority of data will be provided by the KanCare 2.0 MCOs with additional member and administrative data from the State of Kansas. Specific datasets and elements for evaluating are discussed with each metric within Section B, above, and in the demonstration goal sections to follow.

Primary data collection is expected for the qualitative elements of the demonstration evaluation, with particular interest in understanding referrals for MAT from residential treatment facilities. Member survey questions related to SUD have historically been fielded by MCOs. Those surveys will be reviewed for validity and reliability and questions will be reviewed for precision to the qualitative objective with potential for modification (objectives to be determined). Key informant interviews and focus group sessions may also be a source of primary data collection, though the topics, objectives, and participants/settings have not yet been determined.

Table D-1. Data Sources for Evaluation of the SUD Demonstration

Data Source	Owner/Steward	Brief Description
Healthcare Effectiveness Data and Information Set (HEDIS)	KanCare 2.0 MCOs	Member-level detail tables for HEDIS measures submitted by the MCOs.
Managed care administrative data	KanCare 2.0 MCOs	Administrative overhead, contractual, and other costs unique to the SUD Demonstration.
Managed care case management data	KanCare 2.0 MCOs	Member-level data maintained by MCOs within their specific case management data systems.
Medicaid Management Information System (MMIS) encounter data	KanCare 2.0 MCOs	Encounter/claims data submitted to the State by MCOs used to support HEDIS® and HEDIS®-like performance, Medication-Assisted Treatment, service utilization, and cost metrics for all enrollees.
Member survey data	KanCare 2.0 MCOs	Member responses to questions within MCO-fielded SUD surveys. Survey objectives and questions to be determined.
Medicaid eligibility and enrollment files ("834 files")	State of Kansas	Eligibility and enrollment detail for KanCare members used to determine enrollee aid category and stratify data into subgroups.
Mortality data	State of Kansas	Public health birth, death and other vital records used to track overdose deaths attributed to Kansas residents.
State administrative data	State of Kansas	Administrative overhead, contractual, and other costs unique to the SUD Demonstration.
Key informant / focus group responses	TBD	Feedback resulting from key informant interviews and/or focus group sessions. Qualitative topics, objectives, and participants/settings to be determined.

Analytic Methods

Standard data analysis methods will be used to examine each evaluation question and will be applied to the measures discussed in Section B, above. Where possible, the entire eligible population for the intervention and comparison groups will be included in the evaluation of Demonstration goals, and any pre- and post-intervention changes will be examined. If samples are needed, then power calculations will be completed to ensure validity of the findings.

Source data will be cleaned as appropriate with steps to include reviewing data for missing values, inconsistent patterns, and identification of outliers to ensure quality and appropriateness of data for

analyses required by the evaluation design. For statistical procedures, a final dataset with all required variables will be created by merging data from various sources.

Descriptive statistics will be used to describe demographic characteristics of the study population, intervention groups, comparison groups, and any subgroups. Stratified analysis will be performed to evaluate the impact of the Demonstration on subpopulations if evidence suggests significant differences may exist. Analysis may include chi square testing for independence, logistic regression, and Breslow-Day testing for homogeneity of odds ratios. Trend analysis will be conducted using statistical tests such as a Mantel-Haenszel chi-square test with $p<.05$ indicating statistical significance.

Interrupted Time Series (ITS) Analysis

The ITS analysis will be conducted using aggregate data collected for equally-spaced intervals before and after the intervention. A time series of selected outcomes of interest will be used to establish underlying trends and examined to see if these trends are "interrupted" by the intervention at known points in time (longitudinal effects of intervention), through segmented regression modeling. Segmented regression modeling refers to a model with different intercept and slope coefficients for the pre- and post-intervention time periods.[12] This analysis will measure immediate (level) changes in the rate of the performance measures, as well as changes in the trend (slope) from pre-intervention to post-intervention associated with time. The general form of the ITS model will be used for segmented regression.[5,12] CMS suggestion to consider controls adjustments for confounding variables such as age, gender, race, dual Medicare-Medicaid enrollment, and an error term will be considered for the final model. The methodological issues related to the analytical method such as autocorrelation will be assessed by examining the plot of residuals and the partial autocorrelation function.

One Group Pretest-Posttest (OGPP) Analysis

The OGPP analysis will include statistical tests such as Fisher's Exact and Pearson chi-square tests with $p<.05$ to compare percentages or rates for the baseline and subsequent years. Net improvement will be examined by comparing percentages or rates for the baseline year and final year of the demonstration (as per availability of data). The general form of the intent to treat model will be used for regression.[5] Similar to discussed for ITS, the final model will follow CMS' suggestion where appropriate.

Qualitative Analyses

Qualitative analyses will be performed against the objectives of each qualitative study. For surveys and other qualitative approaches needing a representative sample of the population, a sampling strategy will be devised to include sampling method (random sampling, stratified sampling, convenience sampling, etc.), sample frame, sample size, desired response rate, and quality control and bias reduction elements. For key informant interviews or focus groups a participation strategy will be devised to include participant selection (purposive sample, quota sample, etc.), recruitment, discussion protocols, and communications procedures. Data will be analyzed through theming and descriptive statistics, where appropriate. Research and professional ethics (informed consent, risk minimization, confidentiality, etc.) will be adhered to for all qualitative research.

Evaluation Design Limitations

The Demonstration evaluation has a strong reliance upon quasi-experimental ITS and non-experimental OGPP designs. Therefore, the resultant pre- and post-test evaluation design or comparisons to baselines may not imply causality due to a specific intervention. Further, the reliance upon non-experimental methods for KanCare 2.0 Hypothesis 4 will inhibit interpretations and conclusions from investigation in changes to Kansas' IMDs. Lastly, the Kansas Medicaid managed care model hinders the ability to investigate costs with the same precision that would be possible in fee-for-service models due to capitation arrangements. Every attempt to ensure quality data and analysis will be made for observed

limitations to evaluation design.

Study Population Limitations

As noted previously, the lack of true comparison groups due to state-wide implementation is a major limitation in evaluating the SUD Demonstration. Potential internal and external comparison groups are also limited in their ability to generalize to the study population. The design team ultimately decided against utilizing comparison states due to factors such as T-MSIS Analytic File data lag and challenges in selecting comparison states that would have outcomes identical to Kansas pre-Demonstration state not influenced by state or national trends (e.g., SUPPORT Act and other opioid disaster response, Medicaid waivers or expansions, etc.). Similarly, difference-in-differences analysis was considered for the SUD evaluation but core assumptions were unable to be made due to either lack of true comparison populations ('group invariance'), limited phasing of the statewide demonstration to establish cohorts ('time invariance'), or dynamic changes in comparison population service needs and access ('strict exogeneity').[13]

When available, subgrouping of members within a strategy's target population will be performed. Therefore, there is a possibility of encountering methodological issues that will require application of appropriate techniques. Methodological issues may include: selection bias (e.g., differences between those who may opt-in versus those who may not); spillover effects; multiple treatment threats due to other interventions; effect of confounding variables; inadequate statistical power: and other issues inherent within experimental comparisons and inferences. Appropriate techniques will be applied to address these issues as much as possible.

Over the five-year period, eligibility for receiving Medicaid services may change for some members and they may not be part of intervention or comparison groups. Additionally, the SUD diagnosis status of members may change over time, and certain members may receive SBIRT or assessments even without diagnosis. These issues will be monitored and addressed accordingly by applying appropriate techniques (intent-to-treat analysis; exclusion from analysis, etc.).

Data Source Limitations

The use of administrative claims and encounters data sources for performance measures can be a limitation when used to determine changes in access to services, quality of care, and health outcomes. However, many of the performance measures are validated and stewarded by nationally recognized bodies such as NCQA and widely used for these purposes. While administrative data may identify key cases and statistical trends in performance, these are usually limited in providing detailed health and health behavior information, thus making it difficult to obtain information on possible covariates influencing performance. The use of administrative accounting data for evaluation of costs may also present a challenge in reconciling costs unique to the demonstration across different accounting platforms and practices.

Data lag also causes a challenge in measuring and reporting change in a timely manner. This can affect the availability of data for conducting the evaluation for the entire five-year period of the demonstration. As the evaluation is based on a five-year period, the definitions and specifications of the evaluation measures, policies for data collection, and infrastructure of the data sources may change during the evaluation period following administrative rule or other policy changes, thus leading to unavailability of appropriate data for the analysis of multiple pre- and post-intervention evaluation points needed for comparative interrupted time series and one-group pretest-posttest designs. Additional challenges specific to cost data are lags related to both the resolution and reconciliation of claims but also in availability of administrative data due to fiscal timeframes and policies.

From a qualitative perspective, limitations may exist in the collection and coding of open-ended questions and comments. This includes limitations to the accuracy and precision of data obtained through primary data collection as well as the extent to which interpretations and conclusions may be made. As the SUD surveys are administered independently by each MCO, analysis across the KanCare 2.0 program may not be feasible if survey designs or fielding differs significantly between one or more of the MCOs.

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2. Independent Evaluator

KDHE has arranged to contract with the Kansas External Quality Review Organization (EQRO), Kansas Foundation for Medical Care (KFMC), to conduct the evaluation of SUD Demonstration at the level of detail needed to research the approved hypotheses. They have agreed to conduct the demonstration evaluation in an independent manner in accord with the CMS-approved, draft Evaluation Design. KFMC has over 45 years of demonstrated success in carrying out both Federal and State healthcare quality related contracts. They have provided healthcare quality improvement, program evaluation, review and other related services including the following:

- Kansas Medicaid Managed Care EQRO since 1995 (24 years).
- CMS quality improvement organization (QIO) or QIO-Like entity since 1982 (37 years).
- Utilization Review/Independent Review Organization for the Kansas Insurance Department since 2000 (19 years) and for five other states.

KFMC is accredited as an Independent Review Organization (IRO) through URAC (formerly known as the Utilization Review Accreditation Commission). The URAC Accreditation process is a rigorous, independent evaluation, ensuring that organizations performing IRO services are free from conflicts of interest and have established qualifications for reviewers. Furthermore, through their sub-contract with the Great Plains Quality Innovation Network (a prime CMS contractor), KFMC submits an annual Organizational Conflict of Interest (OCI) certificate to CMS. KFMC considers ethics and compliance an integral part of all their business decisions and the services they provide. The KFMC Corporate Compliance Program supports the commitment of KFMC to conduct its business with integrity and to comply with all applicable Federal and State regulations, including those related to organizational and personal conflicts of interest. The KFMC compliance program ensures potential, apparent and actual organizational and personal conflicts of interest (PCI) will be identified, resolved, avoided, neutralized, and/or mitigated.

Prior to entering into any contract, KFMC evaluates whether the identified entity or the work presents an actual, potential, or apparent OCI with existing KFMC contracts. KFMC will not enter into contracts that are an OCI. If it is undetermined whether the new work could be a conflict of interest with their EQRO and independent evaluation responsibilities, KFMC will discuss the opportunity with KDHE to determine whether a conflict would exist. In some cases, an approved mitigation strategy may be appropriate.

All Board members, managers, employees, consultants and subcontractors receive education regarding conflicts of interest and complete a CMS-developed PCI Disclosure Form. Disclosures include the following:

- Relationships with Insurance Organizations or Subcontractor of Insurance Organizations
- Relationships with Providers or Suppliers Furnishing Health Services Under Medicare
- Financial Interests in Health Care Related Entities
- Investments in Medical Companies, Healthcare or Medical Sector Funds
- Governing Body Positions

3. EQRO Evaluation Budget

This information is available upon request.

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4. Timeline and Major Milestones

Table D-3. Evaluation Budget for the KanCare 2.0 Section 1115 SUD Demonstration	
Deliverable/Activity	**Due Date(s)**
Finalize technical specifications for non-required (state-developed) metrics.	To be determined (following CMS evaluation feedback)
Discuss SUD Demonstration implementation and evaluation progress during existing quarterly EQRO/State/MCO meetings.	Quarterly (already in progress)
Quarterly EQRO/State meetings for preparation of SUD Demonstration progress reports.	Two weeks prior to State deliverable requirements
Draft Interim Evaluation Report in accordance with Attachment N (Preparing the Evaluation Report) of the STCs; will discuss evaluation progress and findings to date.	December 2022 (one year prior to the end of the demonstration)
Final Interim Evaluation Report.	60 days after receipt of CMS comments
Draft Summative Evaluation Report in accordance with Attachment N of the STCs.	June 2025 (18 months from the end of the demonstration)
Final Summative Evaluation Report.	60 calendar days after receipt of CMS comments

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