Request to Extend

Oregon Health Plan
Substance Use Disorder 1115 Demonstration
Current Approved Period: April 8, 2021 – March 31, 2026
Project Number: 11-W-00362/10

Draft Application for Public Comment
Released February 18, 2025

Medicaid and Children's Health Insurance Program
Submitted: <DATE>

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Preface

The State of Oregon is requesting a five-year extension for its substance use disorder (SUD) treatment delivery system administered under Section 1115 of the Social Security Act, entitled "Oregon Health Plan SUD Demonstration" (referred to herein as the 1115 SUD Waiver), which is scheduled to expire on March 31, 2026.

Through this extension, Oregon's efforts will lead to better health outcomes for those individuals with substance use conditions. Oregon will explore aligning the SUD waiver period with the Oregon Health Plan (OHP) 1115 waiver period. Oregon anticipates this change will not only reduce the administrative burden on reporting requirements of two separate waivers but also create better opportunities for alignment of waiver goals and measurements under Oregon's Medicaid Quality Strategy.

The additional period will support Oregon's efforts to continue developing the SUD continuum of care throughout the state and demonstrate the impact of care for individuals at all stages of recovery. This extension will further enable Oregon to effectively implement the necessary changes to the Oregon Medicaid Management Information System (MMIS) Provider Portal to offer the $5,000 lifetime benefit to individuals as they transition from a residential setting to their own home through the Community Transition Services (CTS) offering.

Oregon is also requesting new expenditure and waiver authorities to provide Contingency Management (CM) to individuals diagnosed with a substance use disorder.

CM has demonstrated effectiveness in increasing rates of abstinence [1]in a range of substance use disorders, including use of stimulants, cannabis, alcohol, opioids, and nicotine – improving outcomes and creating more sustainable care.

Since the implementation of the 1115 SUD Waiver, the Oregon Health Authority (OHA) has been enhancing and improving the state's provider delivery system for SUD treatment with the purpose of addressing the statewide polysubstance crisis and providing a robust person-centered approach that supports long-term recovery with a full continuum of care for individuals with SUD.

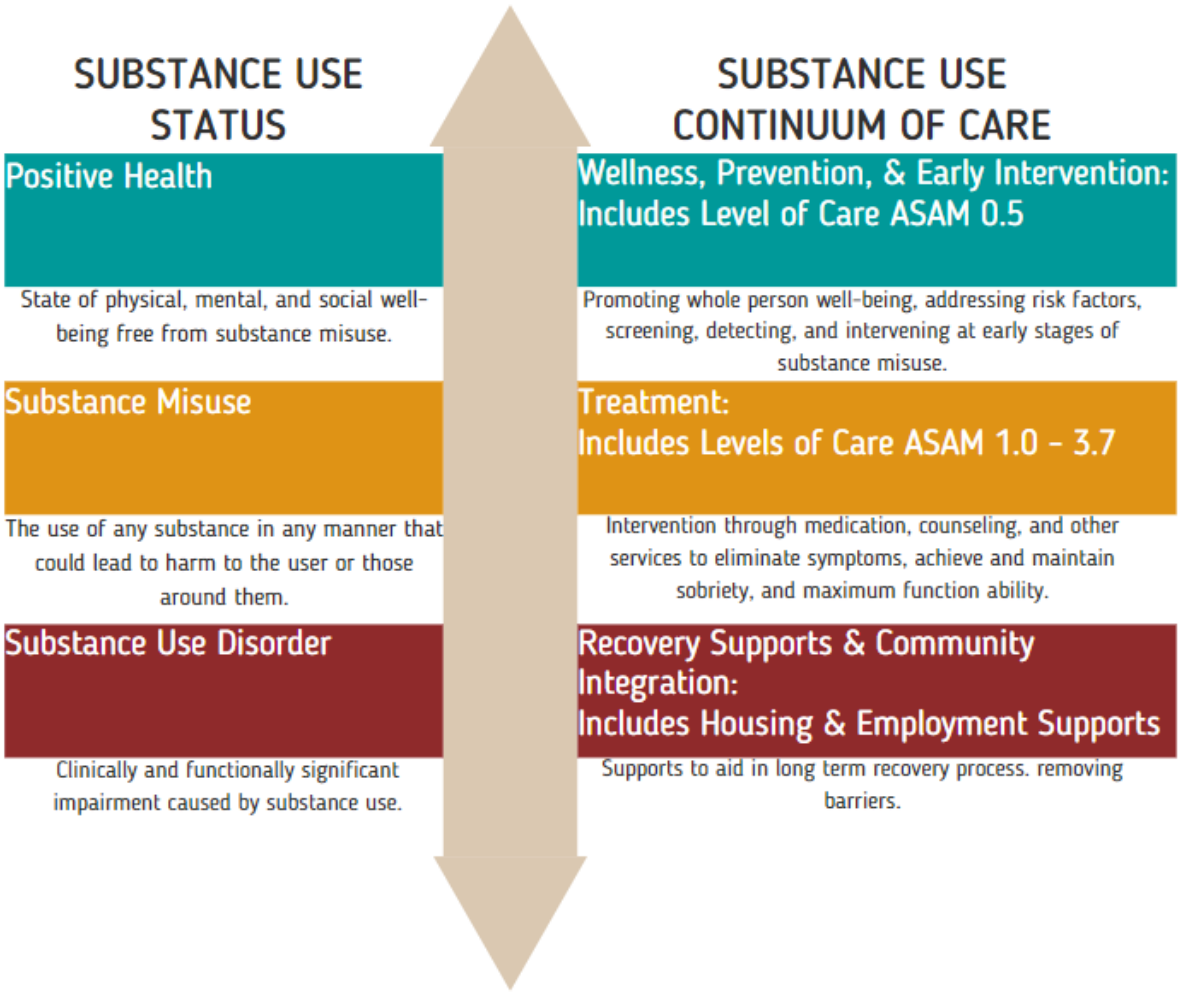
Oregon is actively working to transform its SUD delivery system by continuing to grow the full continuum of care, improving access and utilization of high-quality appropriate

[1] Peirce, J. M., Petry, N. M., Stitzer, M. L., et al. (2006). Effects of lower-cost incentives on stimulant abstinence in methadone maintenance treatment: A National Drug Abuse Treatment Clinical Trials Network study. Arch Gen Psychiatry, 63(2), 201–208.
Bolívar, H. A., Klemperer, E. M., Coleman, S. R. M., DeSarno, M., Skelly, J. M., & Higgins, S. T. (2021). Contingency management for patients receiving medication for opioid use disorder: A systematic review and metanalysis. JAMA Psychiatry. Published online 2021. doi:10.1001/jamapsychiatry.2021.1969.

treatment, increasing rates of identification and engagement in treatment, reducing recurrent visits to equal or higher levels of care including emergency department and inpatient admissions related to substance use and improving quality of care and population outcomes for individuals with SUD.

The 1115 SUD Waiver is an integral part of the state's broader efforts to address the opioid and SUD crises, as well as a bolster to the efficacy of SUD treatments and services. Through the 1115 SUD waiver, Oregon has found success in not only expanding the continuum of care but also expanding SUD services and access in both Institutions of Mental Disease and in community settings. Oregon has expanded access to community integration services through tenancy promoting services and employment development.

Table 1: SUD Continuum of Care



Historical Narrative

Oregon Health Authority: Broad Program Overview

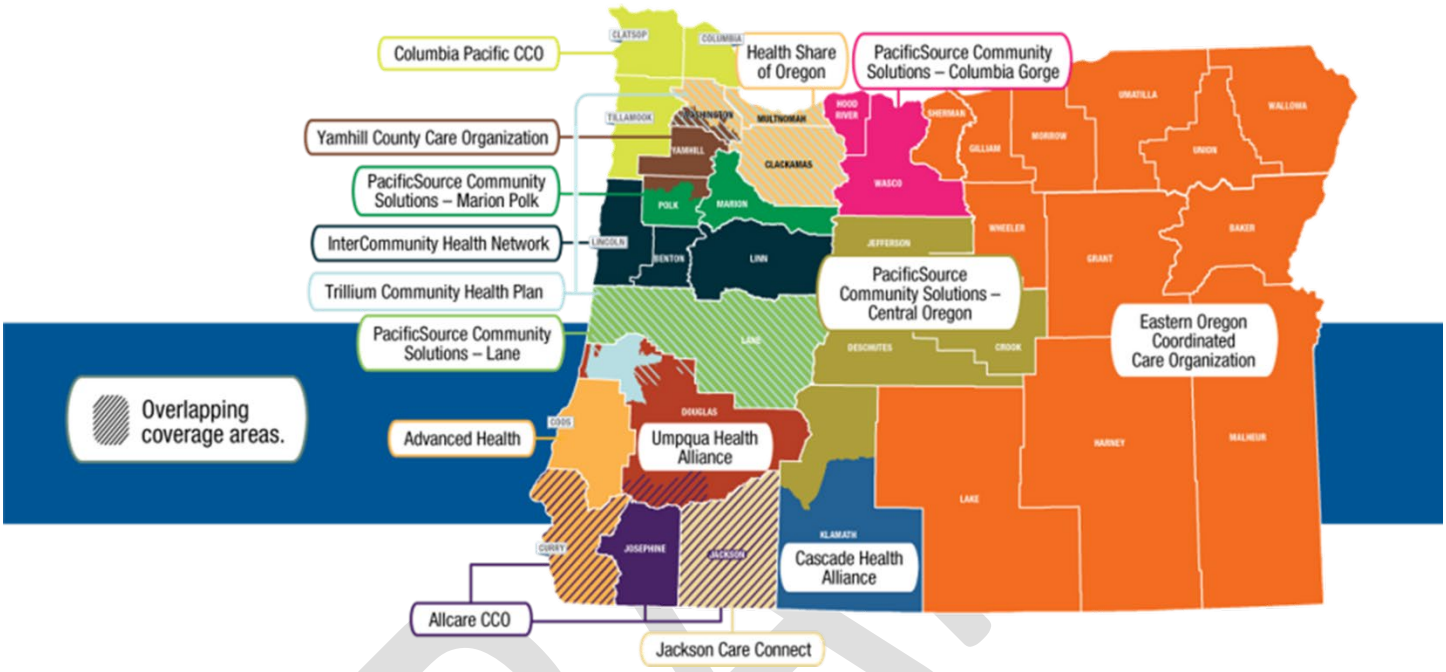
Oregon is a Medicaid expansion state under the Affordable Care Act, with 1,521,285 enrolled in Medicaid and CHIP in October 2023. The Oregon Health Authority (OHA) is the single state agency that administers the Medicaid and State Children's Health Insurance Program, which includes mental health and substance use services and supports on behalf of Oregonians. OHA also administers the Substance Abuse and Mental Health Systems Administration (SAMHSA) Block Grant and provides funding and services for individuals with behavioral health needs who are either uninsured or underinsured by working with Oregon's community behavioral health programs and the local alcohol and drug planning committees.

With this infrastructure, Oregon can deliver SUD services to Medicaid beneficiaries, as well as to the uninsured and underinsured in a coordinated collaborative structure

between the Medicaid and Behavioral Health divisions.

Nearly 90% of individuals are served through the state's sixteen Coordinated Care Organizations (CCOs).

Figure 1 - CCO 2.0 Service Areas



Oregon's CCOs have been operational since 2012 through the state's 1115(a) Medicaid and State Children's Health Insurance Program Demonstration Waiver, Oregon Health Plan (OHP). These CCOs have networks that include many types of health care providers - physical health, substance use disorder, mental health, dental, vision and transportation - who work together within their local communities to serve OHP-eligible individuals.

SUD services are delivered through OHP's comprehensive benefit package. OHP currently provides early intervention (ASAM 0.5) outpatient (ASAM 1.0-1.7), intensive outpatient (ASAM 2.1-2.7), residential (ASAM 3.1-3.7), withdrawal management (ASAM 3.2-3.7 WM), medication assisted treatment (MAT), acupuncture, and peer delivered services.

Demonstration Approval History

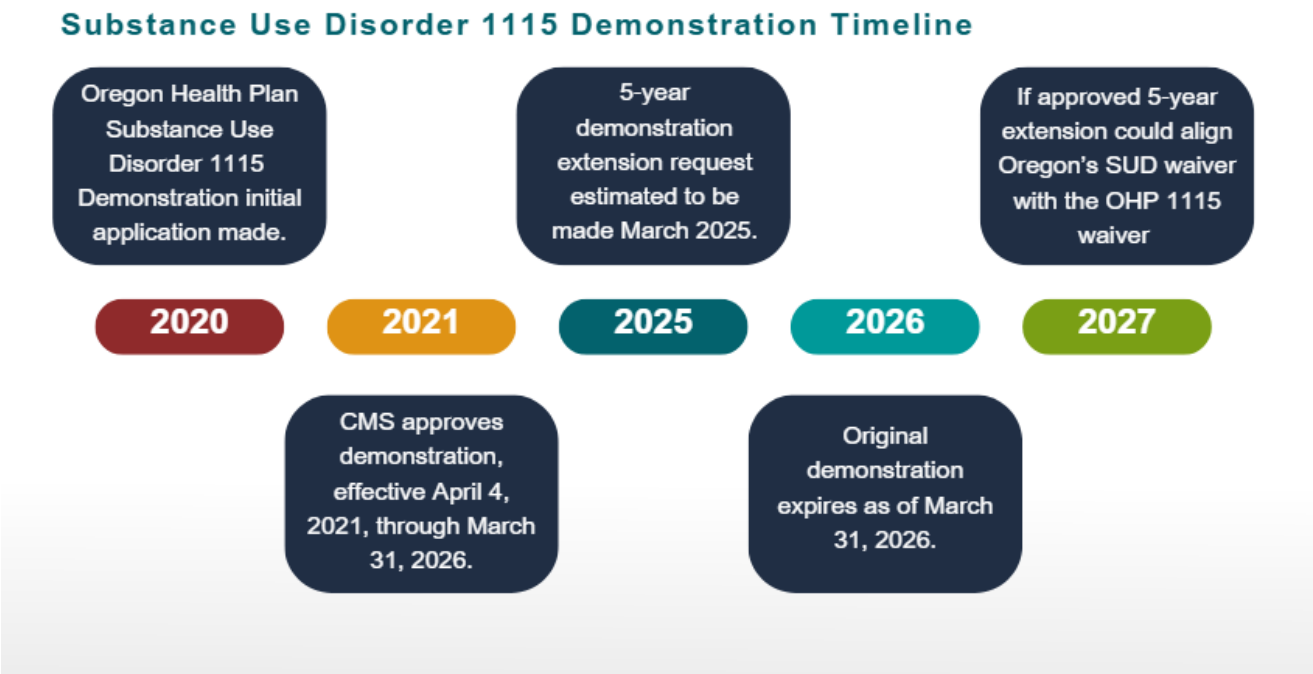
Oregon has long faced significant challenges in addressing the complex needs of individuals with substance use disorders. The state's behavioral health system has been challenged by high rates of substance use, limited access to appropriate levels of care, workforce shortages, and disparities in service availability across regions. Recognizing these barriers, OHA committed to transforming its SUD treatment system

to improve access, equity, and outcomes for Medicaid beneficiaries.

To achieve this, OHA sought federal partnership through an 1115 Demonstration Waiver, focusing on strengthening the state's continuum of care for SUD treatment. Approved by the Centers for Medicare & Medicaid Services (CMS) in April 2021, the waiver set Oregon on a path to implement evidence-based practices, enhance provider capacity, and integrate culturally responsive and co-occurring disorder services across the state's behavioral health landscape. This waiver expanded service delivery options so beneficiaries with a wider range of needs would have access to the appropriate level of care.

This foundational work, undertaken during the initial waiver period (April 8, 2021 – March 31, 2026), has laid the groundwork for lasting systemic improvements while highlighting ongoing challenges and opportunities to further expand and refine the system.

Figure 2 - Estimated Timeline



Central to the approved waiver is the focus on enhancing residential and inpatient treatment services as a crucial component in the continuum of substance use addiction benefits. It accomplishes this by permitting Oregon to receive federal funding for Medicaid services for individuals with a substance use disorder in residential treatment facilities with more than 16 beds or Institutions for Mental Disease (IMDs).

The other major component of this waiver increases the service array for OHP members with substance use disorder to include Community Integration Services, composed of housing and employment support. Oregon is implementing this benefit to help people transition from institutional and residential settings to their own homes within their communities.

The added flexibility from the waiver to provide these services has furthered Oregon's goal to prevent, identify, and treat people with substance use disorder and help them sustain long-term recovery.

Key initiatives, including codifying flexibilities in Oregon Administrative Rules (OAR), adopting a consistent ASAM framework, and improving provider licensing/certification and staffing, have laid the groundwork for sustainable progress. The assessment conducted by Oregon Health & Science University and Portland State University in October 2022 further highlighted areas for improvement, leading to increased provider reimbursement rates and the establishment of ASAM 3.7 residential care.

Additionally, Oregon has extended its efforts beyond integration services, creating pathways for crisis intervention and early recovery support. These expanded services have not only strengthened the state's continuum of care—they have also successfully reduced emergency department utilization statewide.

As a result, Oregon continues to lead by example in addressing substance use disorder, providing a comprehensive and accessible system of care that prioritizes recovery and community reintegration.

Institutions for Mental Disease (IMDs)

Oregon's demonstration aims to ensure that Medicaid and CHIP recipients have access to a full spectrum of SUD treatment and recovery support services. From early intervention and crisis response to embedded medication-assisted treatment (MAT) and high-intensity residential care, including services in IMDs, the state is committed to providing the appropriate levels of care for every stage of recovery.

To achieve this, Oregon is seeking CMS's continued approval to offer SUD services in designated residential and inpatient IMD settings, with Federal Financial Participation (FFP) supporting the full duration of clinically necessary treatment.

By expanding capacity and strengthening the continuum of care, this demonstration underscores Oregon's dedication to enhancing SUD treatment and improving outcomes for individuals and communities statewide.

Monthly utilization of all residential treatment facilities has increased 62% since the waiver demonstration began in Oregon (793 individuals monthly in Demonstration Year 1, Quarter 1, to 1,289 in Demonstration Year 3, Quarter 4)[2] .

Oregon previously used general fund dollars to support 26 licensed IMD programs. Now, 61 programs are licensed for withdrawal management and residential treatment IMDs.

The ability to claim FFP for the use of IMDs continues to be an important component of Oregon's Medicaid and CHIP network and its full continuum of care.

Oregon has demonstrated that claiming FFP for IMDs providing SUD services may increase access for individuals.

Considerations for AI/AN Members

Oregon believes this waiver will continue to achieve its purpose of increasing capacity to enhance SUD treatment and create a full continuum of care while also respecting the unique nature of Health Care for American Indians and Alaskan Natives (AI/AN) in the state.

Indian Health Care Providers intertwine traditional and cultural values in their programs, utilizing Tribal Based Practices. Oregon has recognized Tribal Based Practices equivalent to Evidence Based Practices in legislation, HB 3110 (2011) and SB 134 (2019).

Due to the importance of making available high quality and culturally competent services to AI/ANs, Oregon allows Indian Health Care Providers that qualify as an IMD to offer just one form of medication as part of MAT onsite, either an FDA-approved antagonist or partial agonist.

Spirituality, ceremonies, and cultural practices are used to support those in recovery.

There are concerns that a mandate could conflict with these traditional values that are integral to the operations of these programs, and we do not want to disrupt this well-established recovery community.

Community Integration Services

The 1115 SUD Waiver authority allows Community Integration Services (CIS) as a covered benefit for OHP members with SUD.

[2] Source: Analysis of Decision Support & Surveillance Utilization Review System (DSSURS) claims

CIS consists of housing support services, such as locating and maintaining housing, and employment supports services, such as skill building, job search, and maintaining employment.

Table 2 - CIS: Employment Support

Employment Support: Covered Services[3]	
Employment Support Services	Assessment of workplace readiness (e.g., accessing local job support offices, online job seeking tools).
	Individualized job development and placement (e.g., job fairs, interviews).
	Career coaching (e.g., resume coaching, interview coaching). Job preparation training (e.g., coaching on appropriate personal hygiene and attire, timeliness, workplace behavior and communication, reliability).
	Coordination with other care providers to address behavioral health needs that affect an individual's ability to secure and maintain employment.
Employment Sustaining Services	Assessment of workplace readiness (e.g., accessing local job support offices, online job seeking tools).
	Individualized job development and placement (e.g., job fairs, interviews).
	Career coaching (e.g., resume coaching, interview coaching). Job preparation training (e.g., coaching on appropriate personal hygiene and attire, timeliness, workplace behavior and communication, reliability).
	Coordination with other care providers to address behavioral health needs that affect an individual's ability to secure and maintain employment.

These services are to assist members with a diagnosed SUD and who meet qualifying needs-based criteria transition back into the community from an inpatient or residential setting.

[3] Services not included covered in the Employment Support Services benefit:

- General employer contacts not connected to services provided to the individual.
- Employment support for individuals in sub-minimum wage or sheltered workshop settings.
- Facility-based habilitation or personal care services.
- Wage or wage enhancements for individuals.
- Duplicative services from other state or federal programs.
- Medicaid funds to defray the expenses associated with starting up or operating a business.

Table 3 - CIS: Housing Support

Housing Support: Covered Services[4]	
Individual Housing and Pre-Tenancy Services	Conducting an assessment to identify the individual's needs and preferences related to housing (e.g., type, location, living alone or with someone else, identifying a roommate, accommodations needed, or other preferences).
	Assisting individuals with budgeting for housing/living expenses, including financial literacy education on budget basics.
	Assisting individuals with finding and applying for housing, including: o Filling out housing, utility, and rental assistance applications and o Obtaining and submitting appropriate documentation.
	Assisting individuals with completing reasonable accommodation requests as needed to obtain housing.
	Assisting with identifying and securing resources to obtain housing.
	Ensuring the living environment is safe (including the assessment of health risks to ensure the living environment is not adversely affecting the occupants' health) and accessible for move-in.
	Assisting in arranging for and supporting the details and activities of the move-in.
Individual Housing and Tenancy Sustaining Services	Coordination with the individual to plan, participate in, review, update and modify their individualized housing support plan to reflect current needs and preferences and address existing or recurring housing retention barriers. This must be on a regular basis as determined by providers, including at redetermination and/or revision plan meetings.
	Assistance with securing and maintaining entitlements and benefits (including rental assistance) necessary to maintain community integration and housing stability. This includes helping individuals:

[4] Services not included in the Housing Support Services benefit:

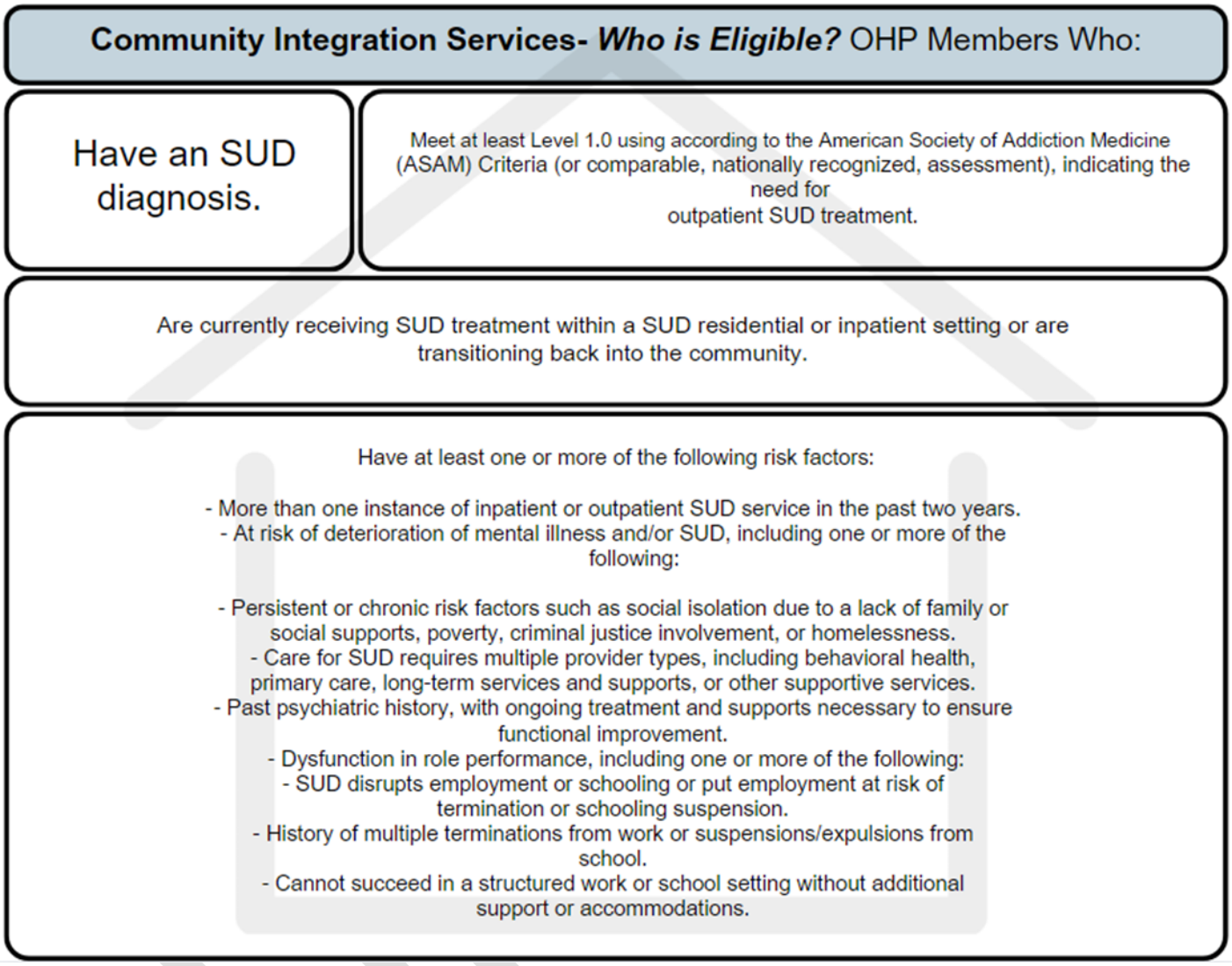
- Payment of rent or other room and board costs.
- Capital costs related to the development or modification of housing.
- Community Integration Services Guide June 2022 5
- Expenses for utilities or other regularly occurring bills.
- Goods or services intended for leisure or recreation.
- Duplicative services from other state or federal programs.
- Services to individuals in a correctional institution or an Institution of Mental Disease (IMD)
- (other than services that meet the exception to the IMD exclusion).

Housing Support: Covered Services[4]	
	o Obtain documentation, o Complete documentation, o Navigate the process to secure and maintain benefits, and o Coordinate with the entitlement/benefit assistance agency
	Assistance with securing supports to preserve the most independent living setting.
	Supports to help the individual develop independent living skills to remain in the most integrated setting, such as skills coaching to help the individual: o Maintain a healthy living environment, o Develop and manage a household budget, o Interact appropriately with neighbors or roommates, o Reduce social isolation, o Utilize local transportation.
	Supports to help the individual communicate with the landlord and/or property manager.
	Education and training on the role, rights, and responsibilities of the tenant and landlord.
	Early identification and intervention for actions or behaviors that may jeopardize housing.
	Shared living support services to cover the additional costs of rent and food that can be reasonably attributed to an unrelated live-in personal caregiver who resides in the same household as the individual. Payment will not be made when the individual lives in the caregiver's home or in a residence that is owned or leased by the provider of Medicaid services.

Inclusion of CIS also permits the State to preserve the SUD continuum of care, while alleviating the significant administrative burdens of creating and operating a separate Medicaid authority specifically for this service. CMS' approval of this service allows Oregon to move forward with its goals to increase the full continuum of care and improve the social determinants of health of our most vulnerable members.

Oregon will continue work to refine the services, including individual access to CIS and provider guidance.

Figure 3 - CIS: Who is Eligible?[5]



[5] Additional criteria for Employment Support Services:
To be eligible for Employment Support Services, the member must also be unable to:
1. Remain gainfully employed for at least 90 consecutive days in the past 12 months due to a mental or physical impairment.
2. Obtain or maintain employment due to age, physical/sensory disability, or moderate to severe brain injury.
Additional criteria for Housing Support Services:
To be eligible for Housing Support Services, the member must also:
-Be at risk of homelessness or currently homeless.
-Have a history of:
o Frequent or lengthy stays in an institutional setting (as defined in 42 CFR 435.1010) or residential setting (consistent with those settings noted in OAR Chapter 309, Division 18 for residential services and residential treatment settings).
o Involvement with the criminal justice system.
o Frequent moves or loss of housing due to substance use disorder (e.g., lapsed rent payments due to SUD residential treatment or hospitalization (including withdrawal management) or psychiatric hospitalization.

Community Transition Services[6]

OHA continues to work on implementing Community Transition Services (CTS) as described in the Community Integration Services.

CTS is designed to assist individuals transitioning out of institutional settings and provider-owned and operated congregate living arrangements, not to exceed $5,000 per member per lifetime, regardless of the number of services.

Supports cover expenses necessary to enable individuals to obtain an independent, community-based living setting.

Specifically, allowable expenses may include: security deposits required to obtain a lease on an apartment or home; essential household furnishings required to occupy and use a community domicile, including furniture, window coverings, food preparation items, and bed/bath linens; set-up fees or deposits for utility or service access, including telephone, electricity, heating and water; services necessary for the individual's health and safety such as pest eradication and one-time cleaning prior to occupancy; moving expenses; necessary home accessibility adaptations; and activities to assess need, arrange for, and procure needed resources.

Demonstration Description and Goals

Demonstration Description

The State of Oregon continues essential efforts through the 1115 SUD Waiver demonstration goals set forth at the time of approval, which would continue to be our future focus through the five-year extension period, with the addition of Contingency Management (CM) interventions.

This demonstration provides the state with authority to provide high-quality, clinically appropriate treatment to beneficiaries with substance use disorder (SUD) while they are short-term residents in residential and inpatient treatment settings that qualify as Institutions for Mental Diseases (IMDs).

[6] Services Not Included in the CIS Housing Benefit:
1. Payment of rent or other room and board costs.
2. Capital costs related to the development or modification of housing.
3. Expenses for utilities or other regular occurring bills.
4. Goods or services intended for leisure or recreation.
5. Duplicative services from other state or federal programs.
6. Services to individuals in a correctional institution or an Institution of Mental Disease (IMD) (other than services that meet the exception to the IMD exclusion).
7. Community Transition Services are furnished only to the extent that they are reasonable and necessary as determined through the service plan development process, clearly identified in the service plan and only when the person is unable to meet such expense or when the services cannot be obtained from other sources. Community Transition Services do not include monthly rental or mortgage expense, food, regular utility charges, and/or household appliances or items that are intended for purely diversional/recreational purposes.

It also supports state efforts to implement models of care focused on increasing support for individuals in the community and home, outside of institutions, and improves access to a continuum of SUD evidence-based services at varied levels of intensity.

The continuum of care is based on the American Society of Addiction Medicine (ASAM) criteria, Oregon's selected nationally recognized assessment and placement tool that reflects evidence-based clinical treatment guidelines.

This demonstration allows the state to provide community integration services which consist of housing and employment supports to individuals transitioning back into the community from an IMD or other residential setting.

Demonstration Goals

1. Assist Oregon in increasing identification, initiation, and engagement of Medicaid beneficiaries diagnosed with SUD;

2. Assist the state in increasing beneficiary adherence to, and retention in, SUD treatment programs;

3. Assist Oregon in reducing inappropriate or preventable utilization of emergency departments and inpatient hospital settings through improved access to a continuum of care services; and

4. Provide a continuum of care to increase the chances of Medicaid beneficiaries of having a successful recovery process.

Our future efforts will be strategically aligned to continue progress towards success in these goals along with the addition of Contingency Management (CM), as they will still serve as the primary focus of our current initiatives.

Demonstration Progress

To enhance provider capacity and establish a documented Continuum of Care for Medicaid beneficiaries, significant efforts have been made to ensure individuals are placed at the appropriate level of care.

Updated Regulatory Framework

Key updates have been made to the Oregon Administrative Rules (OARs) governing residential and outpatient SUD treatment.

Rules for residential treatment, outpatient services, and withdrawal management now

include clear requirements. Levels of Care (LOC) 3.2 and 3.7 specify provider certifications, service offerings, staffing levels, and care coordination. Additionally, the rules detail provider staffing, certification standards, clinically appropriate service hours, and provider qualifications.

Additionally, the OARs now outline the qualifications for providers offering integrated co-occurring disorder services.

Enhanced Reimbursement and Support Programs

An enhanced reimbursement program has been introduced for outpatient programs and clinically licensed individuals providing integrated co-occurring disorders care and culturally and linguistically specific services.

Billing guides accompany this program, ensuring clarity for the types and scope of services approved within the SUD waiver.

Licensing/Certification processes have been updated to ensure providers align with LOC requirements and to assess network adequacy for a complete continuum of care.

OHA has reviewed applications for ASAM levels of care for all current providers and reissued licenses and/or certificates based on approved ASAM levels of care. OHA has amended the application process for all new providers to require application and assessment for compliance to ASAM levels of cares and the corresponding approved levels added to the licenses/certificates. Implementation of ASAM is foundational in providing consistency across the SUD system.

Capacity Assessment and Rate Adjustments

A provider capacity assessment, conducted by the OHSU-PSU School of Public Health in October 2022, evaluated the accessibility and adequacy of SUD services, with a particular focus on residential treatment. Based on findings, a 30% rate increase was provided to behavioral health providers, funded through Medicaid savings from residential treatment beds. Further financial support was allocated in December 2023 to help providers address workforce shortages by hiring and training behavioral health professionals.

Additional reimbursement adjustments occurred, including setting rates for LOC 3.7 residential treatment, and developing a specialized rate for LOC 3.5 to reflect the staffing and support required for Medicaid members.

Expanded Medicaid Services

To broaden the scope of services available to Medicaid beneficiaries, new billing codes have been introduced:

- Brief Intervention Services (H0050): A practice designed to motivate individuals at risk of SUD to change their behavior through short counseling sessions.
- Crisis & Stabilization Services (H2011): Evaluation and treatment during substance use crises, offering immediate support before completing intake evaluations.
- Community Integration Services (H2014): Pre-tenancy and tenancy-sustaining services, as well as employment-related support, for individuals accessing SUD treatment.

Training on these services, supported by the SUD 1115 Waiver Demonstration, aims to increase stability for individuals transitioning from residential treatment to community living.

Opioid Use Disorder (OUD) and Medication-Assisted Treatment (MAT) Expansion Efforts are ongoing to improve access to Opioid Treatment Programs (OTPs) through network assessments and outreach to new providers. Collaborative work between Behavioral Health and Medicaid has opened new billing codes for Naloxone, making overdose reversal drugs more accessible as per Senate Bill 1043.

Separately, Save Lives Oregon continues to prioritize reduced-cost direct access to naloxone through community organizations.

Provider Education and Prescribing Guidelines

OHA has updated opioid prescription recommendations to align with the latest CDC guidelines. Emphasis is placed on humane, patient-centered care for individuals managing high-dose opioid treatment. The Prescription Drug Monitoring Program (PDMP) supports provider education on safe prescribing practices, ensuring alignment with evolving federal and state guidelines.

Demonstration Challenges

Nationally, overdose deaths have risen since the approval of the waiver. The picture in Oregon mirrors that of the national landscape.

Drug overdose deaths have increased from 55.6 deaths per 100,000 Medicaid beneficiaries (762) in 2021, to 65.1 deaths per 100,000 Medicaid beneficiaries (963) in

2022, and 75.0 deaths per 100,000 Medicaid beneficiaries (1223) in 2023.[7] Note: the data gathered to inform this are pulled per demonstration year (April 1-March 31), consistent with waiver reporting, rather than per calendar year.

Synthetic opioids, excluding methadone, have been the dominant drugs identified overdose deaths nationally since 2017.

In Oregon, this has only been true since 2022, when increasingly potent types of fentanyl became available. Psychostimulants with abuse potential (e.g., methamphetamines) had been the dominant drugs identified in overdose deaths in Oregon for several years prior to that time. Even after synthetic opioids overtook psychostimulants in 2022, the rate of overdose deaths attributed to psychostimulants in Oregon is much higher than found in the rest of the US.

Among all Oregonians in 2022, the age-adjusted unintentional/undetermined meth overdose death rate was 17.7 per 100,000, compared to the national average of 10.5 per 100,000.

In the same period, opioids and stimulants in combination were identified in over 40% of overdose deaths statewide[8]. When identifying drug-related deaths instead of overdose deaths, the number of methamphetamine-related deaths was approximately the same as fentanyl-related deaths in 2023 (1,390 vs. 1,247)[9].

From this the need for continued system improvement across all substances of abuse is clear, which is why the extension to continue our crucial work and pursue new strategies like CM is vital.

Revision or Change Request Statement: Goals and Objectives

Contingency Management (CM)[10]

The State of Oregon is expanding its treatment options by adding Contingency Management (CM) to its existing demonstration programs. CM is designed to motivate individuals in recovery by offering incentives for meeting treatment goals.

This benefit will be available through Medicaid participating providers who opt in and receive state-approved training. CM will be offered alongside other therapeutic

[7] Source: Analysis of Decision Support & Surveillance Utilization Review System (DSSURS) Medicaid enrollment data and Oregon Health Authority, Public Health Division, Vital Statistics.
[8] Source: Centers for Disease Control and Prevention. State Unintentional Drug Overdose Reporting System (SUDORS). Final Data. Atlanta, GA: US Department of Health and Human Services, CDC; [accessed 2024-10-08]. Access at: https://www.cdc.gov/overdose-prevention/data-research/facts-stats/sudors-dashboard-fatal-overdose-data.html
[9] Source: Oregon Vital Statistics preliminary 2023, 8/7/2024; 2023 data is incomplete, esp. Aug–Dec 2023
[10] Bolívar, H. A., Klemperer, E. M., Coleman, S. R. M., DeSarno, M., Skelly, J. M., & Higgins, S. T. (2021). Contingency Management for Patients Receiving Medication for Opioid Use Disorder. JAMA Psychiatry, 78(10), 1092. Retrieved October 10, 2023, from https://doi.org/10.1001/jamapsychiatry.2021.1969

interventions, such as cognitive behavioral therapy, and will be modeled after successful programs in other states and Oregon's own State Opioid Response (SOR) initiatives.

Contingency management is one of the most effective behavioral interventions for the treatment of substance use disorders. CM is an especially beneficial treatment option for stimulant use disorders, unlike opioids, there are no FDA-approved medications to treat the use of methamphetamines, cocaine, or other stimulants. Evidence shows CM to be the most effective evidence-based therapy to improve treatment outcomes, including the decrease or cessation of drug use, and longer participation in treatment among those with stimulant use disorder.

Engagement in CM will contribute to a decline in overdose and overdose deaths, as well as contribute to a reduction in emergency department visits.

Benefits:

- Motivational incentives for meeting treatment goals, like attending a therapy visit, taking a prescribed medication, or abstaining from drug use.
- Incentives are in the form of low-denomination gift cards or small prizes

Restrictions:

- Gift cards cannot be used for the purchase of alcohol, cannabis, nicotine products, or for gambling (e.g., lottery tickets)

How to Qualify:

- Available to qualifying individuals who are receiving treatment under Medicaid
- Must be provided through Medicaid participating providers who opt in and are approved by Oregon Health Authority (OHA)

Providers must:

- Receive state-approved training, if deemed necessary by OHA
- Participate in ongoing technical assistance and training to ensure fidelity in program implementation

Incentive Limits:

- Incentive models will be limited to a prize-based model or voucher-based model
- Incentives are a Medicaid-covered item/service, reinforcing verified recovery behaviors using clinically appropriate protocols

This integration helps address various stages of recovery, from initial treatment to long-term maintenance, by offering consistent support through motivational incentives.

CM contributes to better retention in treatment, improved outcomes, and a more comprehensive, holistic approach to care that aligns with the broader goals of Oregon's healthcare system.

The goal of adding Contingency Management (CM) to support Oregon's treatment programs directly supports the improvement of the continuum of care by providing a structured, evidence-based approach to reinforcing recovery behaviors.

Wavier and Expenditure Authorities

The State of Oregon seeks to add Contingency Management (CM) to our demonstration's waivers or expenditure authorities. Oregon seeks to maintain all existing authorities from the existing demonstration.

Waiver Authority	Use of Waiver
Amount, Duration, and Scope of Services: 1902(a)(10)(B)	**Contingency Management:** Allow the state to operate its section 1115 demonstration and to provide federal funding to cover Contingency Management incentives as a medical intervention to any Medicaid eligible individuals with a diagnosis of SUD.

External Quality Review

Mid-Point Assessment

The Oregon Health Authority (OHA) contracted with the Center for Health Systems Effectiveness at Oregon Health & Science University to complete the Mid-Point Assessment (Attachment A).

This report presents assessment findings, cataloging the completion of planned implementation actions and assessing changes in critical metrics associated with each milestone between baseline (2021) and mid-point (2022) years. The assessment also reports feedback from SUD residential treatment providers and coordinated care organizations (CCOs) about the progress of the substance use disorder treatment system and the risks of not meeting the waiver milestones. The findings inform Oregon's continued implementation efforts and highlight how SUD waivers may affect treatment systems in other states.

Table 4: Milestones

Milestone	Description
1	Access to critical levels SUD / OUD care
2	Comprehensive use of patient placement criteria
3	Use of nationally recognized program standard for residential treatment providers
4	Sufficient provider capacity at each level of care
5	Implementation of comprehensive OUD treatment and prevention strategies
6	Improved care coordination and transitions between levels of care

Summary of Findings

The state has completed almost all actions in the Implementation Plan. Performance on just over half of critical metrics (15 out of 27) moved in the targeted direction.

For example, the state's performance on the Withdrawal Management measure, one of seven metrics for Milestone 1: Access to Critical Levels of Care for Opioid Use Disorder and Other Substance Use Disorders, improved by 4.8%, from 0.63 beneficiaries per 1,000 member months receiving services at baseline (April 2021 to March 2022) to 0.66 at the mid-point (April to December 2022).

Conversely, performance on another Milestone 1 metric, Outpatient Services, decreased by 7.1% from 16.46 beneficiaries per 1,000 member months at baseline to 15.29 at the mid-point. Most changes were relatively small. The mid-point assessment is limited by the analysis time frame, measuring differences between 2020 and 2021, during the COVID-19 Public Health Emergency (PHE).

Providers and CCOs perceived progress in several areas across all milestones following recent state policy initiatives. These include increases in Medicaid residential treatment reimbursement rates, reimbursement to providers for engaging with clients before residential treatment and for helping to plan for housing and employment after discharge from treatment, the expansion of telehealth prompted by the PHE, and the

increased availability of naloxone, all of which advanced progress toward Milestones 1 and 5. However, barriers did surface for all six milestones. Administrative burdens hindered providers in many ways, such as the need to frequently reauthorize residential treatment and to interact with multiple CCOs with different policies, billing criteria, and billing codes.

Providers and CCOs alike saw a nexus of obstacles to improving access to the continuum of SUD care, including a rise in fentanyl use, increased severity of addiction and unmet health-related social needs, still insufficient treatment reimbursement rates, difficulty hiring and keeping qualified staff, and inadequate capacity at the withdrawal management and residential treatment levels of care. SUD prevention efforts were limited.

Recommendations

- **All Milestones**
  - Monitor outcomes, especially those not showing improvement.

- **Milestone 1**
  - Standardize requirements across CCOs.
  - Provide ongoing outreach and technical assistance.
  - Evaluation / further increase SUD reimbursement rates.

- **Milestone 2**
  - Workgroup with providers to reduce administrative burden.

- **Milestone 4**
  - Continue outreach to reduce stigma for OUD medication treatment among providers.
  - Support OUD medication access related to residential treatment.

- **Milestone 6**
  - Workgroup to improve information exchange.
  - Clarify and enforce CCOs' care coordination roles and responsibilities.

Financial Data Demonstration

Oregon understands the state must demonstrate budget neutrality for the OHP SUD demonstration extension. Please refer to the OHP SUD Budget Neutrality Spreadsheet at **Attachment B** for information regarding the basis of the budget neutrality calculations and trend rates.

Budget neutrality for the Oregon behavioral health (BH) 1115 Waiver will be

demonstrated through the use of the per capita method outlined in CMS SUD 1115 demonstration budget neutrality template ("CMS template"). The budget neutrality projections were developed using CMS requirements, with the format adjusted to accommodate the two categories of services outlined in this demonstration request.

As discussed above in this application, Oregon is requesting extension of the demonstration authority for the following cost not otherwise matchable (CNOM) expenditures:

1. Expenditures for services furnished to beneficiaries who are residing in an institution for mental diseases (IMD) primarily to receive treatment for a substance use disorder (SUD).

2. Expenditures for community integration and recovery support services. Community Integration Services (CIS) provide housing support services to individuals with SUD who experience chronic houselessness or at risk of houselessness. Recovery support services provide peer services outside of standard treatment to support individuals in their recovery throughout the full continuum of care.

3. Expenditures for Contingency Management (CM). Contingency management is an evidence-based therapy that provides incentives to reinforce targeted client behavior among people with substance use disorder (SUD), and more specifically, stimulant use disorder (StimUD). In CM, treatment staff encourage clients to achieve their goals by providing them with material rewards or prizes soon after a client completes a treatment-adherent behavior, like attending a therapy visit, taking a prescribed medication, or abstaining from drug use.

For the purposes of budget neutrality, this application assumes that these services shall be considered hypothetical expenditures and treated as pass-through services for the purposes of budget neutrality. As clarified by CMS guidance, SUD IMD expenditures are deemed as hypothetical as they would have been otherwise allowable under Medicaid were it not for the IMD/settings prohibition. Expenditures for recovery support services would have been otherwise allowable under Oregon's Medicaid state plan if they were delivered within a treatment plan. Although authority is an option through a 1915i application, community integration services are requested as a CNOM under this 1115 SUD Waiver application to permit the State to preserve the SUD continuum of care while alleviating significant administrative burdens of creating and operating a separate Medicaid authority specifically for this service given it is limited to the targeted SUD population. Likewise, expenditures for contingency management would have been otherwise allowable under Medicaid if not for the federal rules that prohibit or limit providers from offering incentives to patients (anti-

kickback statue, 42 U.S.C. § 1320a-7b(b) and the civil monetary penalty (CMP) law provision prohibiting inducements to beneficiaries), 42 U.S.C. § 1320a-7a(a)(5))

The narrative below describes the budget neutrality calculations outlined in Attachment B.

Estimation for the IMD and CIS Cost Limit

At the time this extension is being submitted, Oregon is not able to produce the historical IMD and CIS expenditures due to the complexity and challenges related to identifying these expenditures in Oregon's information systems and report them in accordance with CMS's requirements.

Oregon is expecting to produce historical information of the demonstration by May 2025.

Oregon estimated the cost limit for the IMD and CIS expenditures with a projected average PMPM cost of the additional services for the population eligible to receive them.

	DEMONSTRATION YEARS (DY)				
	DY 06	**DY 07**	**DY 08**	**DY 09**	**DY 10**
SUD-IMD					
Eligible Member Months	15,076	15,740	16,432	17,155	17,910
PMPM Cost	$2,427.58	$ 2,536.82	$ 2,650.98	$ 2,770.27	$ 2,894.93
CIS					
Eligible Member Months	26,503	33,128	41,410	51,763	64,704
PMPM Cost	$ 240.25	$ 251.06	$ 262.36	$ 274.17	$ 286.51

Estimation of the CM Services Limit

Oregon estimated the service limit for CM expenditures with a projected average PMPM cost of the additional services for the population eligible to receive them. Oregon performed a pilot implementation of these services between October 2020 and September 2022. We determined the base year PMPM and member months on the expected rate for these services and the expected utilization based on the historical data from the pilot implementation. A trend rate, as described below, was applied to the base projections.

	DEMONSTRATION YEARS (DY)				
	DY 06	DY 07	DY 08	DY 09	DY 10
CM					
Eligible Member Months	384	626	1,020	1,663	2,711
PMPM Cost	$ 100.34	$ 104.86	$ 109.58	$ 114.51	$ 119.66

Application of Trends for Projections

The PMPM costs under the IMD and CIS are trended forward using the current SUD Waiver annual rate of 4.5% and the approved PMPM per the current SUD Waiver Statements of Terms and Conditions (STCs).

The member months under the IMD and CIS are trended forward using the current SUD Waiver annual trend rate projection of 4.4% and 25%, respectively.

The PMPM costs under the CM are trended forward using the current SUD Waiver annual rate of 4.5%.

The member months under the CM are trended forward using an annual trend rate projection of 63%.

	DEMONSTRATION YEARS (DY)					
	DY 06	DY 07	DY 08	DY 09	DY 10	Total
Projected Expenditures						
SUD-IMD	$ 36,599,131	$ 39,928,902	$ 43,561,685	$ 47,524,856	$ 51,848,629	$ 219,463,203
CIS	$ 6,367,247	$ 8,317,175	$ 10,864,405	$ 14,191,826	$ 18,538,224	$ 58,278,876
CM	$ 38,531	$ 65,634	$ 111,799	$ 190,431	$ 324,363	$ 730,757
Total	**$ 43,004,908**	**$ 48,311,711**	**$ 54,537,888**	**$ 61,907,113**	**$ 70,711,216**	**$ 278,472,836**

Member Month Non-Duplication

As outlined in the CMS template, the IMD Cost Limit member months in Oregon's calculation are non-duplicative of SUD hypothetical CNOM services limit member months. The IMD member month is defined in the calculations as any whole month during with a Medicaid eligible is inpatient in an IMD at least 1 day. The SUD hypothetical CNOM member month is defined as any month of Medicaid eligibility in which a person could receive a SUD hypothetical service that is NOT an IMD member month. These definitions also follow those in the CMS template.

Oregon also understands that the IMD Cost Limit member months will be non-duplicative of member months reported under the state's broader section 1115 Oregon Health Plan demonstration. To avoid duplication between the two demonstrations, explicit adjustments will be included in the broader 1115 demonstration budget

neutrality reporting to remove the months from the OHP waiver that are included in the calculation for the SUD demonstration. This adjustment will only be made for the IMD Cost Limit member months as the SUD hypothetical CNOM services member months can be duplicative of general comprehensive demonstration budget neutrality limit member months as clarified in the CMS template

Evaluation Report

The Oregon Health Authority (OHA) partnered with the Center for Health Systems Effectiveness (CHSE) at Oregon Health & Science University to create the evaluation plan for the 2021-2026 1115 SUD Waiver. Please see Attachment C for this document.

The currently approved evaluation plan describes five demonstration goals and related hypotheses that guide the evaluation of Oregon's SUD waiver.

We anticipate integrating Contingency Management (CM) into our current demonstration goals and evaluation hypothesis as part of the overall strategy for the SUD 1115 waiver. It is important to note that this integration will not alter the existing goals and hypotheses; rather, it will serve as a supplement to enhance and support them.

The following table lists these demonstration goals and hypotheses and will **remain the same** during the requested extension period.

Table 5 - Goals & Hypothesis

Demonstration Goal	Evaluation Hypothesis
Goal 1: Increase rates of identification, initiation, and engagement in treatment for OUD and other SUDs.	Hypothesis 1: The demonstration will increase the percentage of beneficiaries who are referred and engage in treatment for OUD and other SUDs.
Goal 2: Improve adherence to and retention in treatment for OUD and other SUDs.	Hypothesis 2: The demonstration will increase the percentage of beneficiaries who adhere to treatment of OUD and SUDs.
Goal 3: Reduce utilization of emergency department and inpatient hospital settings where the utilization is preventable or	Hypothesis 3: The demonstration will decrease the rate of emergency department and inpatient visits within the

Demonstration Goal	Evaluation Hypothesis
medically inappropriate through improved access to other continuum of care services.	beneficiary population for SUD.
Goal 4: Provide a continuum of care to increase the chances of Medicaid beneficiaries having a successful recovery program.	Hypothesis 4: The demonstration will increase the percentage of beneficiaries with OUD or other SUDs who complete a successful recovery program.
Goal 5: Reduce overdose deaths, particularly those due to opioids.	Hypothesis 5: The demonstration will decrease the rate of overdose deaths due to opioids.

As part of the waiver and following the approved evaluation plan, CMS required Oregon to conduct an independent evaluation of the demonstration. Evaluation components include a Mid-Point Assessment, completed in May 2024; an interim assessment as summarized in this section in draft and seen in Attachment D; and a summative assessment, to be completed in 2027.

Key Findings

The **draft** interim report presented is an assessment of implementation efforts through the end of 2023.

This report is still being reviewed by OHA for both accuracy and mitigating factors which may have contributed to the presented outcomes, such as COVID-19.

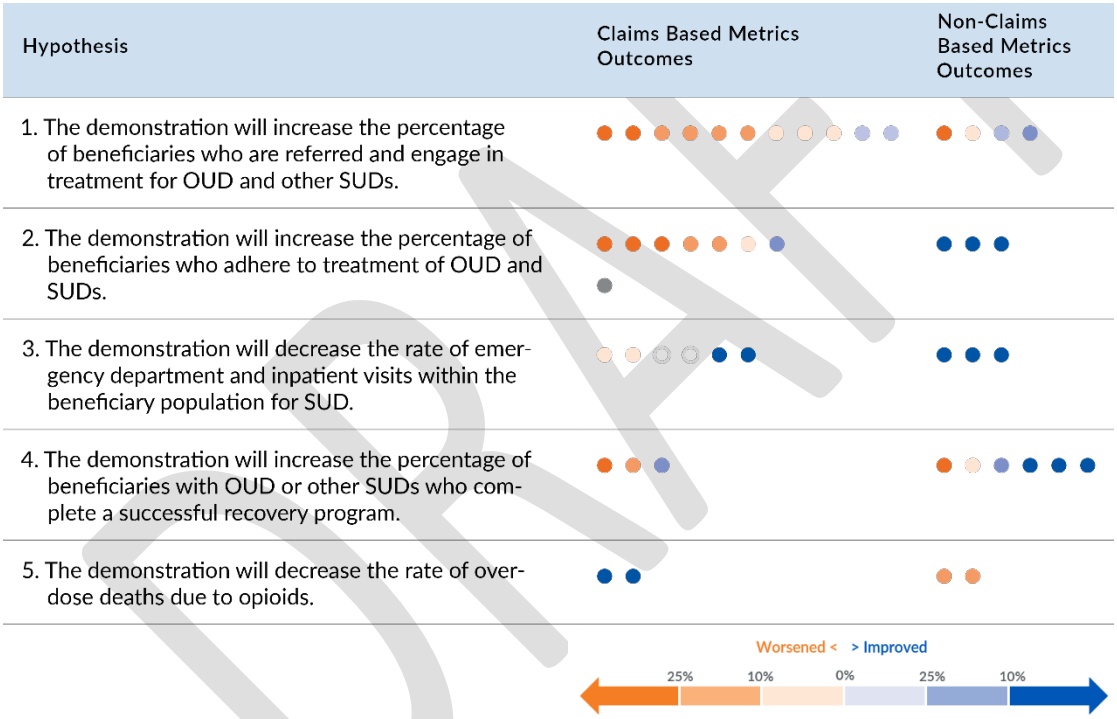
The interim report has yet to be approved by CMS.

- **The state improved its continuum of care in some areas, while losing ground in others.** The number of Medicaid members with OUD accessing supportive housing, supportive employment, and peer-delivered services increased, although levels of supportive housing and employment were modest by 2023. Early intervention, withdrawal management, and access to preventive ambulatory health services declined. However, MPA findings suggest that early intervention and withdrawal management improved between 2021 and 2022, signaling a possible rebound after the initial phase of the COVID-19 pandemic.

- **Care coordination measures declined.** Rates of follow-up after emergency department (ED) visits for mental illness and for alcohol and other drug abuse or dependence declined or stayed flat from pre-waiver through 2022. These measures also did not improve after 2021, suggesting that care coordination deteriorated even as the pandemic receded.

- **Access to residential treatment got worse.** Oregon obtained an SUD waiver to increase access to residential treatment. However, the rates of treatment in IMDs, the number of SUD IMDs, and the number of SUD beds in IMDs all declined, suggesting the opposite outcome.

Table 6 - Most claims-based measures did not move in the desired direction, and changes for non-claims measures were mixed.



- **The use of medication for treatment was mixed.** While the rate of Medicaid members using medication to treat OUD and other SUDs increased, the rate that continued with OUD pharmacotherapy declined. Moreover, findings from the MPA suggested that medication treatment remained flat between 2021 and 2022.

- **Emergency department visits and hospitalizations declined.** ED utilization for SUD, inpatient stays for SUD, and readmissions to hospitals all declined. This was an encouraging finding consistent with the waiver goal of reducing preventable or medically inappropriate high-intensity care.

- **Spending for SUD services declined.** Overall Medicaid spending declined moderately to strongly from pre-waiver to 2022, from $638.30 per member per month (PMPM) to $519.46 PMPM. So did spending in all sub-categories, which included ED spending, other outpatient spending, inpatient spending, prescription drug spending, behavioral health spending, SUD IMD spending, non-SUD IMD spending, and non-SUD spending.

- **Only a few outcomes varied for sub-populations.** Receipt of any SUD treatment declined among the full population, but improved among Medicaid members 65 years and older, dually eligible Medicaid members, and Medicaid members with an OUD diagnosis. Use of Medication-assisted treatment increased for the full population but declined among Medicaid members categorized as Black. Prescription drug spending, which declined moderately for the full population, increased among Medicaid members 65 years and older, dual eligible Medicaid members, and Medicaid members categorized as "other" for race.

Recommendations

Based on findings, the following recommendations were offered:

- **Investigate and address shortcomings in follow-up after ED visits.** Follow-up after ED visits is an important part of the continuum of care. Declines in follow-up after ED visits for mental illness persisted in the interim report and the MPA, suggesting an ongoing trend. Improvement strategies could include identifying ED providers with low follow-up rates and working with their organizations or provider networks on care coordination. Additionally, OHA should assess how many Medicaid members with SUD have case managers who can help them navigate the health care system. Case management services were expanded to all individuals with SUD as part of the waiver, but not all Medicaid members with SUD may be aware of this benefit. OHA could also work with CCOs and providers employing case managers to establish accountability for follow-up care and, if suitable, create financial incentives for them.

- **Assess reasons for declines in the rate of treatment in IMDs, the number of SUD IMDs, and the number of SUD beds in IMDs.** Increasing access to residential treatment was an important goal of Oregon's SUD waiver and declines in IMD-related measures suggested that the state has moved in the wrong direction. A first step could be to reach out to IMDs to better understand the observed declines. OHA

should also continue working with Governor Kotek and reach out to state legislators to increase funding for residential bed capacity. Governor Kotek's 2025-2027 budget proposes $90 million to increase treatment beds, but the budget must compete with transportation, education, housing and other social service priorities.

- **Continue increasing OUD medication treatment and improve continuity of OUD pharmacotherapy.** Strategies could include encouraging primary care providers to prescribe more buprenorphine; encouraging opioid treatment programs (OTPs) to provide take-home methadone to stable patients; reviewing coordinated care organizations' (CCOs') contracts to ensure that increasing the rate of OUD medication treatment and keeping patients on OUD pharmacotherapy are incentivized; and assessing factors that may contribute to disruptions in OUD medication treatment.

- **Monitor and address the fentanyl crisis. We observed an increase in opioid-related deaths.** This is consistent with the most recent CDC statistics showing an overall decline in deaths nationally yet an increase in Oregon. This development is alarming, and fentanyl is likely a major contributing factor. OHA should closely monitor fentanyl-related deaths and continue naloxone distribution efforts to reverse overdoses.

- **Increase enrollment in supportive housing and employment.** While enrollment for both services increased, levels were low as of 2023, especially for supportive housing. OHA could review the capacity for more services and intensify outreach to increase awareness and enrollment accordingly.

- **Monitor outcomes that did not improve in this interim report but did improve in the MPA.** A number of measures followed this pattern: early intervention, initiation, and engagement of treatment for alcohol abuse or dependence, initiation and engagement of treatment for total AOD abuse or dependence, intensive outpatient and partial hospitalization services, residential and inpatient services, withdrawal management, SUD treatment in an IMD., Improvements after 2021 suggested a reversal of trends. However, these measures still did not move in the desired direction from the pre-COVID period to 2022. Continued monitoring of these measures will further clarify whether promising trends for the period 2021-2022 will continue throughout the waiver period, or whether some of these outcomes require further attention.

After this draft report is reviewed, confirmed as accurate, and accepted by all parties the OHA SUD Behavioral Health teams will immediately begin evaluating these recommendations to determine ways to improve our measures.

Extension Public Notice Process

In alignment with 42 CFR 431.408, Oregon is following the Public Notice Policy prior to submission of the Request to Extend.

Original SUD 1115 Waiver and Implementation Plan

Oregon engaged with Tribal partners, key leaders, and external partners by asking for public input on the current SUD 1115 Waiver and Implementation Plan.

The notice and input process allowed Oregon Tribal and Urban Indian populations, consumers, health systems, CCOs, providers, and other key partners and the public the opportunity to comment on the proposed SUD 1115 waiver demonstration.

The Oregon Health Authority staff have intentionally engaged leaders and partners across the state. The application was developed in consultation and collaboration with state, local and other partners, such as Tribal Health Leaders. The Waiver has had input from the Substance Use Disorder Waiver Advisory Committee throughout the development of the Concept Paper and the Application and Implementation Plan.

OHA with and received feedback from organizations, groups and individuals, including: Consumer and member advocacy groups, including Oregon Recovers; Fourth Dimension; Mental Health and Addiction Association of Oregon (MHAAO); Recovery High School; and Oregon Family Support Network (OFSN).

Hospitals and Behavioral Health Systems leaders, including Oregon Council on Behavioral Health; Integrated Health Clinics; The Tri-County Behavioral Health Providers Association (TCHBHPA); and Oregon Health Science University (OHSU)/ Project Echo.

Coordinated care organization leaders, including CCO Behavioral Health Directors and other representatives of CCOs such as Healthshare; Jackson Care Connect & Columbia Pacific; and Trillium.

Governments and local government organization, including Oregon's Nine Federally Recognized Tribes; Several County Mental Health Programs (CMHPS) such as Linn, Benton, and Lane Counties.

Health and health care committees, advisory groups and work groups, and boards, including the Oregon Health Policy Board (public meetings); Medicaid Advisory Committee (public meetings); the Oregon Consumer Advisory Council (OCAC), OHA's Peer Delivered Services Core Team; and the Addictions and Mental Health Planning and Advisory Council (AMPHAC).

Other community leaders and Medicaid consumer-involved agencies and organizations, such as, Native American Rehabilitation Association (NARA); the Alano Club; Central City Concern; Wellness Center Klamath Falls; YouthEra; Reconnections Counseling; and Cascadia Behavioral Healthcare.

Prior to the beginning of the public comment period, Oregon engaged partners through numerous meetings to develop the concept paper and the draft waiver posted online on January 14, 2020.

Tribal Consultation

As part of the process to extend this critical waiver, OHA is conducting a Tribal consultation period prior to submission, ensuring the voices of Oregon's Tribes are fully considered and aware of the next phase of this effort.

This consultation period reflects the state's commitment to honoring government-to-government relationships and addressing the unique needs of Tribal communities within the SUD system of care.

ATTACHMENT A

Oregon Health Plan 2021-2026 Substance Use Disorder 1115 Demonstration

MID-POINT ASSESSMENT

May 30, 2024

CENTER FOR HEALTH SYSTEMS EFFECTIVENESS

Prepared for:
Oregon Health Authority

OHSU

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We thank representatives from Oregon's Coordinated Care Organizations and substance use disorder residential treatment facilities for their generous participation in interviews. We also thank the staff at the Oregon Health Authority for information on Oregon's Medicaid transformation efforts, assistance with obtaining data for the evaluation, and feedback on this report.

About Us

The Center for Health Systems Effectiveness at Oregon Health & Science University is a research organization that uses economic approaches and big data to answer pressing questions about healthcare delivery. Our mission is to provide the analyses, evidence, and economic expertise to build a more sustainable healthcare system.

CHSE's publications do not necessarily reflect the opinions of its clients and funders.
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Table of Contents

Acronyms

AOD	Alcohol or Other Drug
ASAM	American Society of Addiction Medicine
CCO	Coordinated Care Organization
CIS	Community Integration Services
CMS	Centers for Medicare and Medicaid Services
EDIE	Emergency Department Information Exchange
EHR	Electronic Health Record
HIE	Health Information Exchange
IMD	Institutions for Mental Disease
LOS	Length of Stay
MAT	Medication-Assisted Treatment
MPA	Mid-Point Assessment
OAR	Oregon Administrative Rules
OBOT	Office-Based Opioid Treatment
OHA	Oregon Health Authority
OTP	Opioid Treatment Program
OUD	Opioid Use Disorder
PDMP	Prescription Drug Monitoring Program
PHE	Public Health Emergency
PMPM	Per Member Per Month
SUD	Substance Use Disorder

Overview

On April 8, 2021, Oregon obtained approval for a Section 1115 waiver designed to help maintain and expand access to treatment for adults with substance use disorder (SUD). The SUD waiver focuses on residential and inpatient treatment, permitting the use of federal matching funds for short-term residential treatment services in Institutions for Mental Disease (IMD) for adults with SUD. Federal funding for services in an IMD is contingent on the state's progress toward a set of six milestones for care delivery. The Centers for Medicare and Medicaid Services (CMS) required Oregon to conduct an independent mid-point assessment (MPA) to examine progress on the six milestones and associated performance targets outlined in the SUD waiver, identify factors affecting their achievement, and provide recommendations for state actions to support improvement.

The Oregon Health Authority (OHA) contracted with the Center for Health Systems Effectiveness at Oregon Health & Science University to complete the mid-point assessment. This report presents assessment findings, cataloging the completion of planned implementation actions and assessing changes in critical metrics associated with each milestone between baseline (2021) and mid-point (2022) years. The assessment also reports feedback from SUD residential treatment providers and coordinated care organizations (CCOs) about the progress of the substance use disorder treatment system and the risks of not meeting the waiver milestones. The findings inform Oregon's continued implementation efforts and highlight how SUD waivers may affect treatment systems in other states.

Summary of Findings

The state has completed almost all actions in the Implementation Plan. Performance on just over half of critical metrics (15 out of 27) moved in the targeted direction. For example, the state's performance on the Withdrawal Management measure, one of seven metrics for Milestone 1: Access to Critical Levels of Care for Opioid Use Disorder and Other Substance Use Disorders, improved by 4.8%, from 0.63 beneficiaries per 1,000 member months receiving services at baseline (April 2021 to March 2022) to 0.66 at the mid-point (April to December 2022). Conversely, performance on another Milestone 1 metric, Outpatient Services, decreased by 7.1% from 16.46 beneficiaries per 1,000 member months at baseline to 15.29 at the mid-point. Most changes were relatively small. The mid-point assessment is limited by the analysis time frame, measuring differences between 2020 and 2021, during the COVID-19 Public Health Emergency (PHE).

Providers and CCOs perceived progress in several areas across all milestones following recent state policy initiatives. These include increases in Medicaid residential treatment reimbursement rates, reimbursement to providers for engaging with clients before residential treatment and for helping to plan for housing and employment after discharge from treatment, the expansion of telehealth prompted by the PHE, and the increased availability of naloxone, all of which advanced progress toward Milestones 1 and 5. However, barriers did surface for all six milestones. Administrative burdens hindered providers in many ways, such as the need to frequently reauthorize residential treatment and to interact with multiple CCOs with different policies, billing criteria, and billing codes. Providers and CCOs alike saw a nexus of obstacles to improving access to the continuum of SUD care, including a rise in fentanyl use, increased severity of addiction and unmet health-related social needs, still-insufficient treatment reimbursement rates, difficulty hiring and keeping qualified staff, and inadequate capacity at the withdrawal management and residential treatment levels of care. SUD prevention efforts were limited.

Following CMS guidelines, we assessed the state's risk of not meeting each milestone. We assigned the overall risk of not meeting a given milestone by using the highest-risk assessment of the three data sources: progress on critical metrics from baseline to mid-point, completion of implementation action items, and feedback from providers and CCOs. Using these criteria, we assigned Milestones 1 and 6 a high risk based on interview participant feedback. We assigned Milestone 2 a medium risk based on critical metric performance and participant feedback, and Milestone 4 a medium risk based on participant feedback. We assigned Milestones 3 and 5 a low risk.

Recommendations

Based on our findings, we believe the following actions may improve the potential for the state to meet its goals for milestones at medium or high risk:

Milestone 1: Access to Critical Levels of Care for Opioid Use Disorder (OUD) and other Substance Use Disorders (SUDs)

- **Consider adding standardization requirements to future CCO contracts** to reduce the administrative burden placed on providers interacting with multiple CCOs. Provider resources spent on maintaining compliance with multiple CCOs and the Division of Medical Assistance Programs requirements could be better allocated to client care delivery. Specifically:
    - Streamline and align service authorization processes across CCOs.
    - Align coding and billing procedures across CCOs.
    - Encourage CCOs to relax restrictions on peer-delivered services to align with best practices for this kind of care, such as allowing providers to bill for drop-in visits.
    - Establish guidelines related to minimum length-of-stay (LOS) authorization for patients, including consideration of CCO quality metrics to ensure LOS determinations are achieving good outcomes.
- **Provide ongoing, robust outreach and technical assistance around:**
    - Behavioral health coding and billing, particularly for community integration services (CIS) and pre-engagement, ideally as a collaboration between OHA and CCOs. Several providers refrained from using the new billing codes because they were unsure of how to use them and didn't want to have claims denied by CCOs.
    - Augmenting the SUD workforce by encouraging the full scope of practice for qualified mental health professionals, in particular for integrating mental health and SUD care. For example, OAR 309-019 allows a qualified mental health professional with an appropriate number of hours of SUD training experience to provide SUD services for a limited time without being a certified alcohol and drug counselor. It was noted that not everyone is aware of this policy, so more effective dissemination and promotion could help expand workforce potential among qualified mental health professionals.
- **Evaluate SUD treatment reimbursement rates,** particularly for residential treatment, and continue to look for ways to ensure they "are sufficient to enlist enough providers so that care and services are available under [Medicaid] at least to the extent that such care and services are available to the general population in the geographic area," as required by Section 1902(a)(30)(A) of the Social Security Act. Participants reported an ongoing need to augment their funding through grants to provide basic services and referred to the greater availability of care for patients with commercial insurance compared to patients with Medicaid.

- **Continue to monitor measures related to Milestone 1 that did not show progress** (Outpatient Services, Medication-Assisted Treatment (MAT), and Continuity of Pharmacotherapy for Opioid Use Disorder (OUD)) and continue the implementation task of engaging with CCOs to improve MAT capacity.

Milestone 2: Use of Evidence-based, SUD-specific Patient Placement Criteria

- **Consider convening a workgroup of providers** to identify ways OHA and CCOs could reduce the burden on providers to adopt a new assessment, conduct regular training, and research best practices for modifying assessments to account for dual diagnosis or cultural needs.
- **Continue monitoring utilization and LOS for residential treatment facilities.** Rates for the number of Medicaid Beneficiaries Treated in an IMD for SUD improved, but the change was very small and thus classified as "no progress." Average LOS in IMDs was well below the target at the baseline and further decreased at the mid-point. While this development was consistent with the target, which required the average LOS to remain below 30 days, it may raise concerns that LOS could be inadequate for some patients.

Milestone 4: Sufficient Provider Capacity at Critical Levels of Care including for MAT for OUD

- **Continue outreach to providers to reduce the stigma of MAT** and consider incentives to recruit new providers to become substance use medication prescribers, especially for buprenorphine and other non-methadone options.
- **Focus on how to support MAT access in non-outpatient opioid treatment programs (OTPs) and office-based opioid treatment (OBOT) settings,** including ways to collaborate with MAT providers on wraparound services and care coordination.
- **Continue to allow the use of telehealth in MAT,** especially in rural areas where transportation is a major barrier to access.

Milestone 6: Improved Care Coordination and Transitions between Levels of Care

- **Consider convening a workgroup to assess provider needs to improve information exchange and care coordination**. Providers stated that information-sharing regulations, shifts in Oregon Administrative Rules, and a lack of health information exchange (HIE) infrastructure imposed hurdles when providing care across settings. One participant specifically called out the need for support with electronic signature software, such as DocuSign, that would help speed up the intake and referral process and reduce burdens for clients and providers alike. HIE investments could also help align existing systems and enable the shift from paper to electronic health records to help increase the accessibility of information and facilitate care coordination. Such investments would be a considerable lift for the state and would take a long time to fully implement. While HIE investments should be a consideration for future planning, OHA could seek provider feedback about other difficulties related to information exchange and care coordination and potential remedies actionable in the short term.
- **Clarify and enforce care coordination roles and responsibilities of CCOs.** Participants saw a lack of continuity of care when members of one CCO had to receive services in another region, impeding the likelihood of successful recovery. Clear messaging from OHA to CCOs and providers alike that outlines where the responsibility lies for each aspect of care coordination and transitions between levels of care would support positive outcomes.

- **Continue to monitor measures related to Milestone 6 that did not show progress.** Follow-up after Emergency Department Visit for Alcohol and Other Drug (AOD) Dependence or Mental Illness. Efforts to improve care coordination may aid in moving these metrics in the desired direction.

Roadmap to the Report

Chapter	Name	Content
1	Introduction	Introduction to the SUD waiver and its milestones Oregon's Medicaid program and other SUD-related efforts
2	Methods	Data sources Analytic methods Limitations of the assessment
3	Findings	Trends in SUD diagnosis Overall feedback from stakeholders Progress on critical metrics by milestone Implementation action items Interviewee assessments Summary of the findings by milestone Assessment of overall risk of not meeting milestones Budget neutrality assessment
4	Next steps	Independent Assessor recommendations for milestones at moderate to high risk for not being met State responses to findings and recommendations, including any planned modifications to demonstration processes or implementation activities Description of areas at risk of not meeting milestones and list of proposed activities for addressing deficiencies

Introduction

Overview

On April 8, 2021, Oregon obtained approval for its Section 1115 waiver ("Oregon Health Plan Substance Use Disorder 1115 Demonstration, Project Number 11-W00362/10") designed to help maintain and expand access for adults with substance use disorder (SUD), with a focus on residential and inpatient treatment. The SUD waiver permits the use of federal matching funds for short-term residential treatment services in an Institution for Mental Disease (IMD) for these populations, "aim[ing] for a statewide average length of stay (LOS) of 30 days or less."[1]

Since 1965, federal law has prohibited the use of federal Medicaid matching funds for services provided to Medicaid enrollees ages 21 through 64 in facilities with the IMD designation, defined as facilities with more than 16 beds that specialize in mental health or SUD treatment. In 2015, the Centers for Medicare & Medicaid Services (CMS) allowed states to pursue Section 1115 demonstration waivers that removed the IMD exclusion. In 2017, State Medicaid Director letter 17-003, ***Strategies to Address the Opioid Epidemic***, described the new initiative as "aimed at giving states flexibility to design demonstrations that improve access to high quality, clinically appropriate treatment for opioid use disorder (OUD) and other SUDs."

Without an SUD waiver, CMS permits federal matching funds for services provided in an IMD only for individuals under 21 or over 64 years old; however, the SUD waiver allows states to receive federal matching funds for residential treatment services in an IMD for adults ages 21-64 with SUD, on the condition that the statewide average LOS in IMDs is 30 days or less. CMS also requires states with SUD waivers to implement models of care focused on improving access to a continuum of SUD evidence-based services at varied levels of intensity for individuals in the community and outside institutions. The continuum of care must be based on the American Society of Addiction Medicine (ASAM) criteria or other nationally recognized assessment and placement tools that reflect evidence-based clinical treatment guidelines. Most states have since taken advantage of waivers' opportunity to bolster their efforts in tackling substance misuse. As of November 2023, 34 states and the District of Columbia had approved Section 1115 waivers of the IMD payment exclusion for SUD treatment. Four states had such waivers pending.[2]

BOX 1.1 The IMD exclusion

An IMD is defined as "a hospital, nursing facility or other institution of more than 16 beds that is primarily engaged in providing diagnosis, treatment, or care of persons with mental diseases, including medical attention, nursing care, and related services" (Social Security Act §1905(i)). IMDs are generally licensed or accredited facilities that specialize in providing psychiatric, psychological, and/or SUD treatment services.

Since 1965, the IMD exclusion has prohibited state Medicaid programs from obtaining federal financial participation to pay for IMD services. The policy was intended to support a shift from institutionalized care to community-based treatment for mental illness while establishing states as the primary payer for inpatient mental health services. The exclusion applies to services provided

to Medicaid beneficiaries between the ages of 21 and 64. It does not preclude states from receiving federal Medicaid funding for Medicaid enrollees 21-64 years old who receive services provided in facilities that do not meet the definition of an IMD, such as facilities with 16 or fewer beds, or for Medicaid beneficiaries younger than 21 or older than 64 who receive services in IMDs. In 2016, CMS amended the rules for Medicaid managed care such that state capitation payments to managed care entities for enrollees admitted to an IMD qualified for full federal matching as long as their IMD LOS did not exceed 15 days in a calendar month.

Approval of Oregon's SUD waiver provided expenditure authority for all Medicaid state plan services, including a continuum of services to treat SUD. The state added to the continuum housing and employment supports for individuals transitioning back into the community from an IMD or other residential setting. Federal funding for services in an IMD is contingent on the state's progress toward a set of milestones for care delivery. Progress will be evaluated based on an implementation plan (SUD Implementation Plan), performance targets on a set of critical metrics (SUD Monitoring Protocol) agreed upon between the state and CMS, and budget neutrality requirements. CMS required Oregon to conduct an independent mid-point assessment (MPA) of the SUD waiver to examine progress on milestones and performance targets, including factors affecting their achievement and the risk of failing to meet them.[1]

The Oregon Health Authority (OHA) contracted with the Center for Health Systems Effectiveness at Oregon Health & Science University to complete the MPA. This report presents its findings.

Waiver Implementation in the Context of a Shift to Integrated, Accountable Care in Oregon's Medicaid Program

Oregon's implementation of the IMD waiver occurred against the backdrop of other system changes affecting SUD treatment delivery. Some of the changes were specific to Oregon's Medicaid program, while others were broader state initiatives aimed at bolstering the state's response to a widely acknowledged behavioral health crisis.

The IMD waiver came into effect as Oregon was almost 10 years into a major restructuring of its Medicaid systems, one that prioritized behavioral health integration, care coordination, and supports for members' social needs. Before 2012, behavioral health services for Medicaid enrollees were funded and delivered separately from medical services through prepaid behavioral health plans, many of which were operated by counties.[3] This led to a system in which mental health and SUD services were siloed from other health care with little accountability for coordination of services.

Oregon's 2012-2017 Section 1115 waiver inaugurated the coordinated care organization (CCO) model, which featured regional organizations with accountability for members' physical, behavioral, and oral health needs. Some CCOs formed from a single managed care organization, maintaining their contractual relationships with health care providers. Other CCOs formed from partnerships among managed care organizations, health systems, mental health organizations, dental care organizations, and county health departments. Sixteen CCOs were approved in the first round of contracting. Most regions were served by a single CCO, although a few, including the Portland metropolitan area, were served by two CCOs.

While the CCO model had similarities to both managed care organizations and accountable care organizations, it included several distinguishing characteristics that made it unique among Medicaid delivery systems and potentially gave CCOs greater tools to address member SUD needs:

Local governance with representation from health care providers, Medicaid members, and other community members. CCOs' governance structures include broad local participation to ensure communities' health needs are being met. Other provisions also ensure that CCOs respond to community needs. CCOs were required to establish agreements with local governments, carry out community health assessments, and develop community health improvement plans based on these assessments.

Global budgets covering physical, behavioral, and oral health care. CCOs receive global budgets in the form of per capita payments to cover the cost of members' physical, behavioral, and oral health care. While CCOs are accountable for managing all services covered by the global budget, they have the flexibility to allocate their global budgets to meet the needs of their members and communities. Global budgets place CCOs at risk for all types of health care, creating a financial incentive to coordinate and integrate different types of care.

Flexibility to use funds to address social determinants of health. CCO budgets allowed for flexibility to spend funds on services and supports that might not meet the traditional definition of medical necessity. The CCO model allowed for spending on such needs as housing supports, nutrition, and home alterations if such expenses could improve outcomes and reduce spending growth.

Integration of Traditional Health Workers. Workers include peer support specialists and peer wellness specialists, available to assist Medicaid members in recovery from SUD or living with co-occurring disorders.[4]

Accountability for health care access and quality. CCOs served as a single point of accountability for members' health care access and quality. The Oregon-CMS agreement required that quality of care, as defined by 33 measures, would not diminish over time. In addition, OHA publicly reported CCOs' performance on a variety of outcome measures, reinforcing accountability. CCOs could also receive incentive payments from a state Quality Incentive Program ("Quality Pool") for improving specific member outcomes, called CCO incentive measures.

While most Medicaid members were required to enroll in a CCO, members of Oregon's nine Federally Recognized Tribes and Medicare and Medicaid dual-eligible members could choose between CCO enrollment or fee-for-service coverage. Medicaid members with special health needs were required to transition from fee-for-service coverage to a CCO after receiving an individualized transition plan to meet their care needs. By 2014, almost 90% of the state's one million Medicaid enrollees received care through CCOs.

Oregon's 2017-2022 waiver extension built on the strengths of the CCO model while addressing some of its shortcomings. The extension emphasized the following efforts:

An expanded focus on the integration of physical, behavioral, and oral health care through a performance-driven system. Integrating the financial and delivery systems of physical, behavioral, and oral health had been a core element of the CCO model. The 2012-2017 experience, while promising, demonstrated that additional time, effort, and coordination among different sectors (e.g., health care, corrections systems, counties, other agencies) would be necessary to achieve full integration. During the demonstration extension period, OHA and CCOs committed to taking the following actions:

- Implementing and supporting models of care that promote integration, such as the Certified Community Behavioral Health Clinic Demonstration project
- Supporting Oregon's Behavioral Health Collaborative workgroups in developing and implementing a behavioral health framework that addresses the systemic and operational barriers to the integration of mental health and substance abuse services

An enhanced focus on social determinants of health. The evaluation of Oregon's 2012-2017 waiver found that spending on flexible services was relatively modest. Expenditures on flexible services were inhibited by several factors, including confusion over what was allowable and how expenditures would be treated in assessing medical-loss ratios and setting future rates. The waiver extension addressed several of these issues and also allowed CCOs to earn financial incentives if they improved quality and controlled per capita cost growth through health-related services.

Increased use of value-based payments. Oregon committed to developing a value-based payment roadmap for CCOs with targets for value-based payments by the end of the demonstration period. CCOs were also required to create at least one VBP model for behavioral health services.

As OHA prepared to renew CCO contracts in 2020 under the 2017-2022 waiver, Oregon's Health Policy Board assessed ongoing needs for SUD and other behavioral health services. Based on feedback from system partners, the board concluded that the state's behavioral health systems continued to suffer from fragmented financing with de facto carve-outs and siloed delivery systems. For SUD services, the board-issued Medicaid policy recommendations included:

- Improving access to a full continuum of care, including withdrawal management, residential, outpatient, and recovery support services
- Addressing culturally and linguistically appropriate services through network adequacy
- Prohibiting arrangements through which CCOs fully sub-capitated and delegated behavioral health benefits (passing accountability to other organizations)
- Increasing support for health information technology and HIE.

Oregon's Dynamic SUD Policy Landscape

The SUD waiver in Oregon is just one piece of the state's 2020-2025 Statewide Strategic Plan[5] in which block grants from the Substance Abuse and Mental Health Services Administration, participation in the federal Certified Community Behavioral Health Clinic demonstration program, and policies to increase the capacity of the peer-delivered services workforce continue to play an important role. In recent years, Oregon has greatly ramped up its response to the SUD crisis, driven by high rates of SUD and the recent influx of fentanyl into the state, coupled with inadequate access to services and a severe behavioral health workforce shortage.[6] The state legislature appropriated a $1.35 billion investment in the 2021-2023 biennium to support large-scale improvements to the state's behavioral health system.[7] Additional policies in place up to the time of the MPA include:

- July 2021 – Measure 110 and SB 755 decriminalized unlawful possession of controlled substances, provided access to SUD assessment and treatment, and established Behavioral Health Resource Networks in each county to provide low-barrier access to treatment, housing, and harm reduction services.[8,9]
- July 1, 2022 – HB 5202 allowed OHA to implement a 30% rate increase to the Medicaid behavioral health fee schedule and allowed certain "pre-engagement" codes to be billed before an actual assessment. This occurred in response to provider feedback collected during a rapid assessment and the ability to utilize state general fund money that had previously been used for IMD payments.[10]
- July 27, 2021 – HB 2980 provided funding for peer-run organizations to operate respite centers supporting individuals with mental illness or trauma response symptoms.[11]

- August 6, 2021 – HB 2086 developed recommendations to improve access to services for people with serious mental illness and co-occurring disorders, focusing on culturally specific services.[12]
- August 6, 2021 – HB 2949 established incentives and grants to increase recruitment and retention of culturally responsive behavioral health workers and provided supervised clinical experience pathways.[13]
- March 23, 2022 – HB 4098 established the means to disperse $325 million in National Opioid Settlement funds through 2040.[14]

The state continues to implement new SUD initiatives and programs as part of its larger effort to transform the behavioral health delivery system. The current governor and state legislature have prioritized policies to combat the SUD crisis by expanding access to crisis services, treatment, and housing supports, and creating a robust and diverse behavioral health workforce.[15] Recent policies enacted after the data collection period of the MPA include:

- August 4, 2023 – January 1, 2024 – HB 2395 and HB 1043 were approved, both aimed at increasing access to long-acting opioid antagonists for opioid overdose reversal.[16,17]
- September 24, 2023 – HB 2757 appropriated funds to support and expand the 9-8-8 behavioral health crisis hotline.[18]
- October 1, 2023 – HB 5202 allowed OHA to implement an additional 3.4% rate increase for behavioral health services.[19]
- January 1, 2024 – SB 238 created a drug education and prevention curriculum for public school districts.[20]
- November 2024 – Oregon's 2022-2027 Section 1115 waiver will include health-related social need supports for individuals transitioning out of residential treatment settings, starting November 2024.[21]

As these policies are implemented throughout the waiver period, they will likely affect SUD outcomes.

Oregon's SUD Waiver Milestones

To obtain federal funding under the SUD waiver, Oregon agreed to demonstrate progress on a set of six milestones.

Milestone 1: Access to Critical Levels of Care for OUD and other SUDs

- Coverage of OUD/SUD treatment services across a comprehensive continuum of care within 12-24 months of demonstration approval including (a) outpatient, (b) intensive outpatient, (c) medication-assisted treatment (MAT, medication as well as counseling and other services with sufficient provider capacity to meet needs of Medicaid beneficiaries in the state), (d) intensive levels of care in residential and inpatient settings, and (e) medically supervised withdrawal management.

Milestone 2: Use of Evidence-based, SUD-specific Patient Placement Criteria

- Implementation of a requirement that providers assess treatment needs based on SUD-specific, multidimensional assessment tools, such as the ASAM Criteria or other assessment and placement tools that reflect evidence-based clinical treatment guidelines, within 12-24 months of demonstration approval.

- Implementation of a utilization management approach such that beneficiaries have access to SUD services at the appropriate level of care and that the interventions are appropriate for the diagnosis and level of care, including an independent process for reviewing placement in residential treatment settings within 12-24 months of demonstration approval

Milestone 3: Use of Nationally Recognized SUD-specific Program Standards to Set Provider Qualifications for Residential Treatment Facilities

- Implementation of residential treatment provider qualifications in licensure, policy or provider manuals, managed care contracts or credentialing, or other requirements or guidance that meet program standards in the ASAM Criteria or other nationally recognized, SUD-specific program standards regarding in particular the types of services, hours of clinical care, and credentials of staff for residential treatment settings within 12-24 months of demonstration approval.
- Implementation of a provider review process to ensure that residential treatment providers deliver care consistent with the specifications in the ASAM Criteria or other comparable, nationally recognized SUD program standards based on evidence-based clinical treatment guidelines for types of services, hours of clinical care, and credentials of staff for residential treatment settings within 12-24 months of demonstration approval.
- Requirement that residential treatment providers offer MAT on-site or facilitate access to MAT off-site within 12-24 months of demonstration approval.

Milestone 4: Sufficient Provider Capacity at Critical Levels of Care including for MAT for OUD

- An assessment of the availability of providers enrolled in Medicaid and accepting new patients in the critical levels of care throughout the state, or in the regions of the state participating under this demonstration, including those that offer MAT within 12 months of demonstration approval.

Milestone 5: Implementation of Comprehensive Treatment and Prevention Strategies to Address Opioid Abuse and OUD

- Implementation of opioid prescribing guidelines along with other interventions to prevent prescription drug abuse.
- Expanded coverage of and access to naloxone for overdose reversal.
- Implementation of strategies to increase utilization and improve functionality of prescription drug monitoring programs (PDMP).
    - ***Milestone 5a: SUD Health Information Technology (IT) Plan*** must detail the necessary health IT capabilities in place to support beneficiary health outcomes to address the SUD goals of the demonstration. The plan will also be used to identify areas of health IT system ecosystem improvement.

Milestone 6: Improved Care Coordination and Transitions between Levels of Care

- Implementation of policies to ensure residential and inpatient facilities link beneficiaries with community-based services and supports following stays in these facilities within 24 months of demonstration approval.

MPA Requirements

As part of the waiver, OHA is required to provide CMS with an independent MPA on progress toward the waiver milestones. The assessment must contain the following components:

- An examination of state progress toward meeting each milestone, including whether the state progressed according to the timeframe approved in the demonstration implementation plan, and demonstrated progress toward closing the gap between baseline and target each year in monitoring metrics, as outlined in the state's approved monitoring protocol.
- A determination of factors that affected state achievement towards meeting milestones and monitoring metric targets to date, identification of factors likely to affect future performance in meeting milestones and targets not yet met, and discussion about the risk of possibly missing those milestones and metrics targets.
- An assessment of whether the state is on track to meet its budget neutrality requirements, including recommendations for adjustments in the state's implementation plan or to factors that the state can influence that will support improvement, if necessary.
- If applicable, modifications to the state's implementation plan, financing plan, and monitoring protocols for addressing milestone and metric targets at medium to high risk of not being achieved.
- A description of methodologies used, with justifications, for examining progress and assessing risk, the limitations of the methodologies, and the independent assessor's determinations and any recommendations for the state.

Methodology

Overview

In this chapter, we describe how we carried out the MPA. We list the data sources and methods used to collect and analyze data from each source. We present the rubric for assessing the risk of not meeting milestones for each data source and conclude with the limitations of our approach. This project was approved and overseen by the Oregon Health & Science University Institutional Review Board.

Data Sources

The MPA incorporates data from various sources, detailed in Table 1.

Table 1. Data Sources

Data type	Data source
Critical metrics	Medicaid claims provided by OHA
Implementation plan action items	Point-in-time update of OHA tracking of implementation plan completeness
Feedback from relevant organizations	Presentations to behavioral health organizations and associations on the conduct of the evaluation
Qualitative findings from interested parties	Interviews with IMD, SUD program, and CCO staff

Analytic Methods

Critical metrics

Metric Selection and Data Sources

CMS selected 19 critical metrics across five of the six demonstration milestones, presented in Table 2. We assessed progress on the metrics between the demonstration baseline and mid-point.

Table 2. Required Metrics for the MPA

#	Milestone[a]	#	Critical Metric	Period	Type
1	Access to Critical Levels of Care for OUD and other SUDs	7	Early Intervention	Staggered quarterly	CMS-constructed
		8	Outpatient Services	Staggered quarterly	CMS-constructed
		9	Intensive Outpatient and Partial Hospitalization Services	Staggered quarterly	CMS-constructed
		10	Residential and Inpatient Services	Staggered quarterly	CMS-constructed
		11	Withdrawal Management	Staggered quarterly	CMS-constructed
		12	MAT	Staggered quarterly	CMS-constructed
		22	Continuity of Pharmacotherapy for OUD	Staggered quarterly	Established quality measure
2	Use of Evidence-based, SUD-Specific Patient Placement Criteria	5	Medicaid Beneficiaries Treated in an IMD for SUD	Staggered quarterly	CMS-constructed
		36	Average LOS in IMDs	Staggered quarterly	CMS-constructed
3	Use of Nationally Recognized, Evidence-based SUD Program Standards To Set Residential Treatment Provider Qualifications	NA	NA	NA	NA
4	Sufficient Provider Capacity at Critical Levels of Care including for MAT for OUD	13	Provider Availability	Yearly	CMS-constructed
		14	Provider Availability – MAT	Yearly	CMS-constructed
5	Implementation of Comprehensive Treatment and Prevention Strategies to Address Opioid Abuse and OUD	18	Use of Opioids at High Dosage in Persons Without Cancer (NQF #2940)	Staggered quarterly	Established quality measure
		21	Concurrent Use of Opioids and Benzodiazepines (NQF #3175)	Staggered quarterly	Established quality measure
		23	Emergency Department Utilization for SUD per 1,000 Medicaid Beneficiaries	Staggered quarterly	CMS-constructed
		27	Overdose Death Rate[b]	Yearly	CMS-constructed

#	Milestone[a]	#	Critical Metric	Period	Type
6	Improved Care Coordination and Transitions between Levels of Care	15	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (NQF #0004)	Staggered quarterly	Established quality measure
		17(1)	Follow-up after Emergency Department Visit for Alcohol or Other Drug (AOD) Dependence (NQF #2605)	Staggered quarterly	Established quality measure
		17(2)	Follow-up after Emergency Department Visit for Mental Illness (NQF #2605)	Staggered quarterly	Established quality measure
		25	Readmissions Among Beneficiaries with SUD	Staggered quarterly	CMS-constructed

a The milestone groupings for the critical metrics defined in this table align with those included in Version 3.0 of the section 1115 SUD technical specifications manual.
b We did not have vital records for the relevant period, so we were not able to calculate Metric #27 Overdose Death Rate.

We calculated metrics from Medicaid program data, including Medicaid enrollment records with information about each person's demographics, and Medicaid claims/encounters records that identify diagnoses and services each person received. We also used provider enrollment and vital statistics data. Because we did not have Medicare enrollment and claims for the relevant period, we limited the population to beneficiaries under age 65 and to those not dually enrolled in Medicaid and Medicare. See Appendix C for further description of each metric.

Statistical Analyses

The metrics were developed at the beneficiary level. The quantitative analysis required defining a baseline and mid-point period. Following CMS guidance, which considers the MPA part of states' monitoring efforts, we used baseline and mid-point definitions based on CMS' Technical Specifications for Monitoring Metrics (see Table 3).

Table 3. Baseline and Mid-Point Measurement Periods by Metric Reporting Category

Reporting category[1]	Baseline period	Mid-Point period
CMS / State-specific metrics	04/2021 - 03/2022	04/2022 - 12/2022
Annual established metrics	01/2021 - 12/2021	01/2022 - 12/2022

[1] *See table 2*

For each metric, we calculated the absolute change between baseline and mid-point as well as the percentage change relative to baseline levels.

Calculating Changes in Monitoring Metrics

Following guidance from CMS's Technical Assistance for MPAs, we provided the following information for each metric:

- Metric number

- Metric name
- Value at baseline
- Value at mid-point
- Absolute change, defined as the value of metric at mid-point - value of metric at baseline
- Percent change, defined as (value of metric at mid-point - value of metric at baseline)/value of metric at baseline
- State's demonstration target (i.e., decrease, increase or compliant)
- Directionality at mid-point (i.e., decrease, increase, no change, or compliant/not compliant). We classified an increase or decrease of less than 2 percent as "no change", consistent with the CMS template for SUD waiver monitoring reports and with OHA reporting practice for the waiver.
- Progress (Yes/No). We categorized progress as "Yes" if the directionality of change aligned with the state's target and "No" otherwise.

Rates reported in this mid-point assessment are based on guidance from CMS and OHA. They may differ from those reported elsewhere due to minor methodological differences, or differences in the way study populations are defined.

Implementation Plan Action Items

The SUD Implementation Plan lists the tasks Oregon agreed to complete in its efforts to achieve the waiver milestones. OHA provided us with the completion status of implementation plan action items at three points in time. We used the first update, provided at the end of February 2023, to provide context for the development of the draft interview guide. We used the second update, from May 2023, to review current progress in preparation for the qualitative interviews. The third and final update, from January 2024, informed our assessment of the level of risk of not meeting the waiver milestones.

Feedback from Relevant Organizations

We presented the waiver evaluation plan to three organizations involved in either SUD advocacy or service delivery. Two organizations were professional associations for providers, and the third was for CCO behavioral health staff. We asked attendees to provide any feedback on the plan, such as:

- What does a successful evaluation look like?
- How should we think about SUD treatment in Oregon?
- Are there recent developments we should consider for context?
- Is there anything else we should be thinking about or people we should be talking to?

Interviews with Interested Parties

We conducted interviews with staff from IMDs and CCOs in June and July 2023. This evaluation focuses on early waiver implementation efforts, so service recipients were not interviewed. Potential interview participants were identified for recruitment from the list of Oregon Medicaid SUD provider organizations as of January 2023. Purposive sampling techniques were employed to maximize representation across geographic region, type and size of organization, population focus, and the role

of the individual within the organization. Sampling variation was limited by the prevalence of relevant organizations in an area who agreed to participate. Of the 33 individuals contacted, 15 individuals from 12 organizations agreed to be interviewed. Upon completion of these interviews, we determined that saturation had been achieved, where no new themes were detected.

Interview participants included directors or similar leadership roles as well as people with direct client contact (Table 4). All participants had past or current direct clinical experience with SUD treatment delivery. All of the state's regions, except for the Oregon Coast, were represented by interview participants. Organizations represented by interview participants included ten IMDs, six serving specialty populations, and two CCOs. Table 4 presents the roles, area of the state, and organizational type of interview participants.

Table 4. Role, Area of the State, and Organizational Type of Interview Participants

Organizational Role of Interview Participants	Number of Interview Participants (n=15)
Executive Director/CEO	5
Residential Services Director	4
Director of Behavioral Health/SUD Services	2
Clinical Director	2
Other Director	1
Lead Admissions Coordinator	1
Characteristics of Interview Participants' Organizations	**Number of Organizations (n=12)***
Geography	
Central Oregon	1
Eastern Oregon	1
Portland Metro	4
Southern Oregon	3
Willamette Valley	4
Organization Type	
CCO	2
IMD (general population)	8
IMD (specialty population)	6

**Organizations could be in multiple geographic areas; IMDs could serve both general and specialty populations.*

Interviews were conducted via video using a semi-structured interview guide and lasted about 60 minutes [see Appendix B]. All interviews were recorded with permission from the participants. Interviewees were asked about:

- Their professional background
- Their awareness of the waiver, its implementation, and related policy changes
- Any changes they/their organization had made or noticed in response to the waiver
- Their view of the role IMDs play in the continuum of SUD care
- Their perception of how the waiver fits into the state's overall plan to improve SUD care
- Their perception of the likelihood of the state achieving each waiver milestone, including any successes or challenges they have encountered.

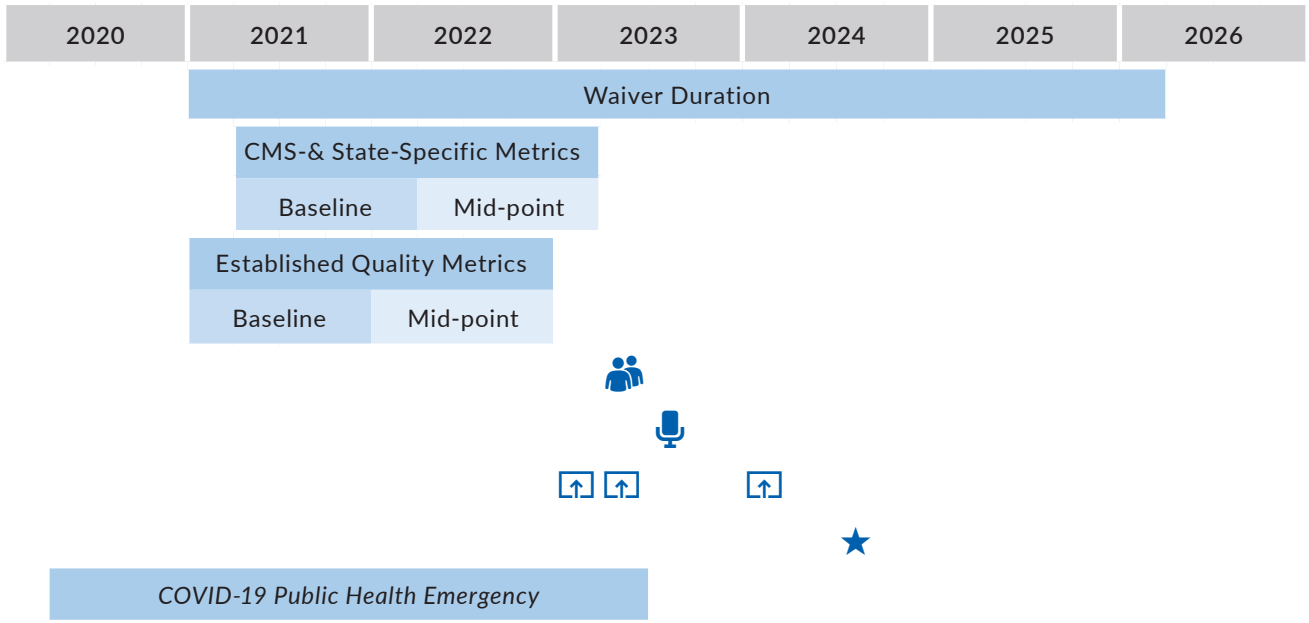
Interviews were transcribed using Otter.ai software and checked for accuracy by evaluation staff. They were then entered into Atlas.ti v. 23 (Scientific Software Development GmbH) qualitative analysis software for data management and analysis. Prior to analysis, a codebook was created based on the interview guide and stated waiver goals. The analysis team met regularly to discuss preliminary coding issues, refine codes, and clarify usage. Two team members separately coded each transcript using the final codebook and met to resolve any discrepancies.

Three team members separately summarized and identified themes for each code which were then discussed as a group to arrive at final themes that emerged during analysis.

MPA Timeline

As shown in Table 5, quantitative data spanned from before waiver implementation to the early waiver period. Qualitative data collection occurred in 2023 and early 2024.

Table 5: MPA Timeline



= Stakeholder feedback
= Interviews
= Update of implementation action items
= Draft report delivered to OHA for review, then to CMS

Assessment of Overall Risk of Not Meeting Milestones

We considered changes in critical metrics, completion of implementation plan action items, and interview participant feedback to assess the overall risk of not meeting milestones, as described in Table 6. We assigned the overall risk of not meeting a given milestone based on the highest risk indicated out of the three data sources.

Table 6: Rubric for Assessing the Risk of Not Meeting Milestones

Data source	Considerations	Overall Risk of Not Meeting Milestones		
		Low	Medium	High
Critical metrics (required)	For each metric associated with the milestone, is the state moving in the direction of the state's annual goal and overall demonstration target?	All or nearly all of the critical metrics were categorized as having achieved progress	Some of the critical metrics were categorized as having achieved progress	Few or none of the critical metrics were categorized as having achieved progress
Implementation plan action items	Has the state completed each action item associated with the milestone as scheduled to date?	All or nearly all of the action items completed	Some of the action items completed	Few or none of the action items completed
Stakeholder feedback	Did key stakeholders identify risks related to meeting the milestone?	Few stakeholders identified risks; risks can be easily addressed within the planned timeframe	Multiple stakeholders identified risks that may cause challenges meeting milestone	Stakeholders identified significant risks that may cause challenges meeting milestone

Limitations

The assessment had important limitations. First, our ability to measure the quality of life, well-being, and changes in mortality or morbidity was limited in administrative data. Second, the SUD waiver represented one piece of larger statewide and national efforts to address the opioid epidemic, and the pre-post analysis cannot distinguish between changes that occurred because of the waiver and concurrent changes that occurred within the state or across states. Thus, we were not able to attribute changes in this study to the SUD waiver alone. Third, our analysis was limited by the short amount of time between waiver implementation and the mid-point period. Future reports evaluating the waiver will provide additional information on the changes occurring in subsequent years, with some increased ability to discern trends in mortality and overdoses.

Finally, key informant interviews were limited in both sampling and scope. In terms of scope, interview questions focused on the state's Medicaid population as a whole. We did not seek to elicit detailed information on subpopulations, such as incarcerated individuals and persons referred to involuntary

treatment. While some key informants had insights into these populations, our data did not permit a comprehensive discussion of their needs. Our depiction of factors contributing to milestone progress reflected the perspectives of our key informants and should not be interpreted as a complete picture of the SUD treatment system in Oregon.

Findings

Overview

In this chapter, we report Oregon's performance in meeting each milestone of the SUD Implementation Plan. We combined quantitative analysis of monitoring metrics and implementation plan completeness with qualitative information collected from key informant interviews.

We first present Oregon Health Plan trends in SUD prevalence, and general perceptions from key informants around the SUD service delivery milieu and waiver implementation. We then present progress on each milestone, drawn from three analyses: changes in each metric from the baseline to the mid-point period of the SUD waiver; which implementation plan action items were complete in the latest update from OHA; and key informants' views on the likelihood of meeting milestones and on factors, whether directly waiver-related or not, that could affect milestone performance.

How to read metric findings

The first table in each milestone assessment presents metric results and contains the following information:

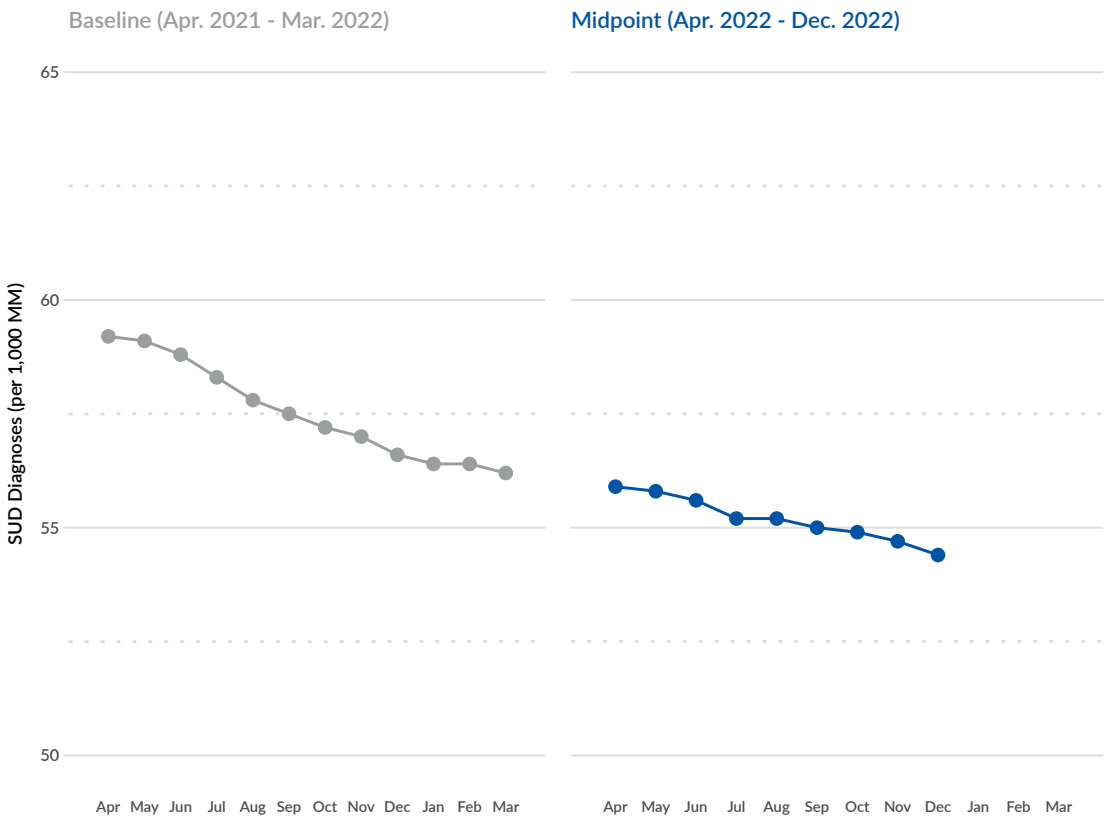
- **Metric name:** Metric name and number as listed in the CMS Technical Specifications Manual, and units of measurement, where "1,000 PMPM" stands for "per 1,000 member months" (e.g., "07. Early Intervention (1,000 PMPM)").
- **Quantitative results:** Levels at baseline and mid-point, absolute change between baseline and mid-point, and relative change between baseline and mid-point expressed as a percent of the baseline level.
- **Target:** *Upward arrow* when the goal is for the metric an increase, or *downward arrow* when the goal is a decrease.
- **Direction:** *Upward arrow* when the baseline to mid-point relative increase exceeded 2 percent, *downward arrow* when the relative decrease exceeded 2 percent, or *equal sign* when the relative change was less than 2 percent in either direction.
- **Progress:** *Y* if the target and direction of change matched; *N* otherwise.

Targets were based on the state's approved monitoring protocol, with some exceptions (noted in tables), for which CMS provided a different target. We color-coded the percent change so that progress is shaded in blue, and lack of progress is shaded in orange. For metric 36 (Average LOS in IMDs), the target was defined as "no more than 30 days," the direction was labeled as "compliant" (average LOS in IMDs did not exceed 30 days) or "not compliant" (average LOS in IMDs exceeded 30 days), and progress was achieved if the metric was compliant.

SUD prevalence

Annual SUD prevalence was 77.2 per 1,000 member months at baseline and 75.2 at mid-point. Monthly SUD prevalence ranged from 54.4 to 59.2 per 1,000 member months and steadily declined between April 2021 and December 2022 (Figure 1). The calculation of SUD prevalence followed the CMS Technical Specifications for Metric #3/Metric #4: Medicaid beneficiaries with SUD diagnosis (monthly/annual), defined as the number of beneficiaries who receive MAT or a SUD-related treatment service with an associated SUD diagnosis.

Figure 1. Monthly Beneficiaries with SUD Diagnosis during Baseline and Mid-Point Periods



Qualitative perspectives around Oregon's SUD treatment system and waiver implementation

Interview participants shared their experiences and general impressions related to the SUD continuum of care in Oregon. This backdrop provides context for understanding factors that could broadly hinder or facilitate implementation of the waiver and milestone progress.

Severity of illness was increasing

Two factors were identified through interviews as increasing the strain on the SUD treatment delivery system. First, the severity of illness and complexity of treatment had increased with the heightened prevalence of fentanyl. For withdrawal management and residential treatment, fentanyl requires more time before a person can be safely discharged and have a chance at a successful recovery.

I think people up until now have really been treating [fentanyl detox] like a heroin detox or pain pills. And it's not like that. It's harder, and it's longer.

Second, people with SUD were presenting with a more severe level of illness. It was hypothesized that this could be due in part to Measure 110 having reduced or eliminated the punitive threat of jail time, which can incentivize people to seek treatment. People were further along in their addiction, causing them to need more intensive services when they sought treatment.

One of the benefits of pre-Measure 110 was that we had sort of a pathway for folks early on in their addiction, early on in their criminal career, to have a chance at breaking that cycle.

Policymaking was fragmented

Many challenges were reported in creating and maintaining an effective SUD service delivery system in Oregon. Best practices in the field of SUD treatment are continuously evolving and shifting, but providers felt that policies have historically been a step behind.

Some perceived that Oregon either did not have a strategic plan to improve SUD prevention and treatment or was not following its plan. Shifting goals after leadership changes in the Governor's office and state agencies were cited as a barrier to the focused, cohesive execution of policies. Several participants expressed appreciation for the hard work and dedication of OHA staff in their efforts to improve the state of SUD treatment. They were hopeful about the attention and energy the waiver was bringing. However, disorganization, staff instability, misinformation, and siloed communication within OHA had caused confusion and a lack of trust between OHA and providers.

...the state of Oregon has such a siloed system, and a disjointed system and who oversees what, and those entities don't communicate. We will have all of these requirements coming down from this side. Yet statute and policy hasn't even been updated on the other side. And our site reviewer is not even aware of the mandate. Nobody at the state level is on the same page, you get different information, different answers, different expectations based on who you talk to. So, you really don't know where you sit, which makes it really hard to deliver a unified system.

Several providers were concerned that OHA had either not solicited or had ignored their input about improving service delivery.

What is discouraging is the lack of input acquired from providers to actually ask 'What do we think the problems are? And what are our solutions?' Because we have them, we know how to work better with our partners. And we know money is the restriction. We like the continued effort, we really respect that. I'm not confident that this is going to roll out in a timely manner. And I think it's different for people at OHA who are working on these types of projects. But for us, our patients are dying. They're dying because they can't stay longer. They're dying because they can't get the medication they need.

Residential bed capacity was insufficient

Oregon was viewed as being severely deficient in residential treatment bed capacity, insufficient to meet the needs of the population. Most of the SUD programs run by interview participants operated at a deficit, tenuously relying on funding streams outside of Medicaid dollars to remain operational.

I would say the vast majority of residential SUD programs that I have known of over the years have operated in significant deficits. And agencies have had to decide to continue to operate them by utilizing monies from other programs to try and make the books balance. The rate increases that have happened recently have been very helpful, but they're only just finally barely getting us to where we can just maybe make it work.

All providers underscored the importance of residential treatment in the continuum of SUD care. They universally viewed residential care as offering a unique ability to focus solely on recovery, skill building, and commitment to sobriety without outside distractions and stressors. Appropriate LOS was also cited as critical to successful recovery, but authorizations for 30 days or less were not compatible with long-term recovery, especially for high-acuity clients and with the increase in fentanyl use.

28 days is barely enough time to just get your head on your shoulders and get through the detox process. There's not a lot of time to really learn the skills you need to maintain sobriety in that.

Hiring and retaining qualified residential staff was a challenge

Further strain on the system stemmed from the severe behavioral health workforce shortage. Many participants described the hiring environment as the most difficult in decades and saw staff shortages as a continuing and significant challenge to providing care. The challenges spanned across all levels of care and staff types, with shortages noted among certified alcohol and drug counselors, qualified mental health professionals, master's level clinicians, nurses, childcare providers at residential facilities, and residential care facilitators. Expanded options and higher pay for remote work made in-person behavioral health and residential treatment work less appealing for many people, leading to stiff competition in hiring.

I've never seen it be this hard to hire people in the 28 years that I've been in the field, particularly people who hold certifications. And we've had to significantly increase pay, which then has offset the increase in the code reimbursements that we've gotten. Because now we've bumped up our program costs significantly, just to get and retain the staff that we need.

While participants acknowledged efforts on the part of OHA and community organizations to recruit and reduce barriers to people entering the behavioral health workforce, difficulty in hiring qualified staff remained. It was also noted that the workforce shortage would affect the state's ability to increase residential treatment capacity due to the high staffing ratios required.

The staffing crisis is really going to be a challenge and opening new beds, particularly for IMDs, just because the staffing ratios are relatively high. So I'm not sure that it's going to see the expansion of residential beds that I think OHA was hoping for.

The impacts of the COVID-19 Public Health Emergency (PHE) lingered

As with all other areas of healthcare, the COVID-19 PHE had a major impact on SUD service delivery. Provider staffing shortages and safety precautions limited the number of treatment beds available and reduced revenue. While state and federal COVID-related funding programs allowed some providers to remain open even with reduced capacity, the COVID-19 PHE forced some facilities to close. Fear and stress experienced by both staff and clients further hindered the ability to provide effective treatment. Staffing shortages, loss of residential beds, reduced administrative support from OHA and

CCOs, and intensified safety precautions during the COVID-19 PHE continued to linger, delaying some aspects of waiver implementation relating to increasing access.

Almost all interview participants referred to the expansion of telehealth infrastructure and Medicaid reimbursement for telehealth as an unexpected, ongoing benefit of the COVID-19 PHE. The expansion was instrumental in facilitating continuity of care during the pandemic and has since increased access to care, including MAT, particularly in remote areas. With the continued ability to use and be reimbursed by Medicaid for telehealth, improvements were seen in access to specialty providers and culturally specific care, increased patient follow-up post-discharge, and decreased no-show rates. Expanded telehealth also allowed for more equitable access, as it allows individuals without reliable transportation, with young children, or with other challenging circumstances to engage more easily in treatment.

Waiver communications were not ideal

The study team assessed most participants as having a fair to good understanding of the waiver and its strategic goals. Participants understood that one intent of the waiver is to cover IMD treatment with Medicaid funds, freeing up general revenue funds to be redirected toward increasing the capacity of the continuum of SUD services. However, some had only a vague awareness of the waiver and its associated services. A few participants, some in roles disconnected from billing and reimbursement, had no knowledge of the waiver or confused it with other policies, such as Measure 110 activities.

Communications from OHA to providers and CCOs about waiver activities were generally characterized as unclear, inconsistent, and missing critical target audiences. While a few participants viewed communications as reasonable or sufficient, most said they lacked needed information about new requirements and billing guidelines.

> *Some come out in statewide memos, some come out in memos targeted to providers, some to CCOs… It seems like some of their communication misses on one or both parties. So, it feels like there's just not a lot of consistency of how they communicate a lot of these changes that should be communicated more broadly, and they shoot them to specific audiences and then it gets lost in the translation.*

The lack of clear technical assistance from OHA let CCOs and providers interpret and implement guidance differently. One provider described spending hours investigating how to bill correctly only to receive both an underpayment from the Division of Medical Assistance Programs and an overpayment from a CCO. Many indicated that the most useful and actionable information about the waiver was obtained through sources outside OHA. External provider partners and community organizations, particularly the Oregon Council for Behavioral Health, were instrumental in disseminating and translating communications from OHA.

Progress Toward Demonstration Milestones

Milestone 1: Access to Critical Levels of Care for OUD and other SUDs

Progress on critical metrics. Table 7 presents progress on the seven metrics associated with Milestone 1. Four metrics (Early Intervention, Intensive Outpatient and Partial Hospitalization, Residential and Inpatient Services, and Withdrawal Management) moved in the desired direction, while three metrics (Outpatient Services, MAT, and Continuity of Pharmacotherapy for OUD) did not. Percent changes were small to moderate in most cases, with the exception of Early Intervention, where a low baseline value resulted in a large percent change despite a small absolute change in the rate. Early

Intervention is defined as the number of member-months during which early intervention services (such as procedure codes associated with screening, brief intervention, and referral to treatment) were received, per 1,000 member months of all beneficiaries with full Medicaid benefits, which may explain the low values.

Table 7. Critical metric results for Milestone 1

Metric	Baseline	Midpoint	Absolute Change	Percent Change	Target	Direction	Progress
07. Early Intervention (10,000 PMPM)	0.04	0.07	0.00	+75.0%	↑	↑	Y
08. Outpatient Services (1,000 PMPM)	16.46	15.29	-1.17	-7.1%	↑*	↓	N
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	1.81	1.85	+0.04	+2.2%	↑*	↑	Y
10. Residential and Inpatient Services (1,000 PMPM)	0.30	0.31	+0.01	+3.3%	↑	↑	Y
11. Withdrawal Management (1,000 PMPM)	0.63	0.66	+0.03	+4.8%	↑*	↑	Y
12. Medication-Assisted Treatment (1,000 PMPM)	12.57	12.57	0.00	0.0%	↑	=	N
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	17.6	16.4	-1.2	-6.8%	↑*	↓	N

*Target provided by CMS; differs from target in state Monitoring Protocol

*Target provided by CMS; differs from target in state Monitoring Protocol

Progress on implementation action items. All 42 implementation action items associated with Milestone 1 were completed (Table 8).

Table 8. Implementation action item results for Milestone 1

Action item category	Action item description	Date to be completed	Current status
Coverage of outpatient services	Develop robust quarterly report for internal quality improvement strategies for SUD services (All levels)	October 2021	Completed
	Set scope of work for the workforce regarding prevention, early intervention, crisis intervention services and establish reimbursement rate	April 2023	Completed
	Set standards for identification, initiation, and engagement. Educate and engage providers around these standards and implementation	April 2023	Completed
	Develop requirement for CCOs to have a mechanism to ensure that they have adequate capacity to serve those in their region around SUD services	April 2023	Completed
	Develop standard range of client ratio	April 2023	Completed
	Develop provider review process around staffing credentials	April 2023	Completed
	Develop more culturally relevant training for peer-delivered services workers, including a tribal-specific course and Latino-specific course	April 2023	Completed
	Expand the number of diversity of culturally specific peers within the workforce	April 2023	Completed
Coverage of intensive outpatient services	Develop robust quarterly report for internal quality improvement strategies for SUD services (All levels)	October 2021	Completed
	Set scope of work for the workforce regarding prevention, early intervention, crisis intervention services and establish reimbursement rate	April 2023	Completed
	Set standards for identification, initiation, and engagement. Educate and engage providers around these standards and implementation	April 2023	Completed
	Require CCO's to have a mechanism to ensure that they have adequate capacity to serve those in their region around SUD services	April 2023	Completed
	Develop alternative payment methodologies for Day Treatment Services	April 2023	Completed
	Develop standard range of client to clinician ratio	April 2023	Completed
	Develop more culturally relevant training for peer-delivered services workers, including a tribal-specific course and Latino-specific course	April 2023	Completed
	Expand the number of diversity of culturally specific peers within the workforce	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Coverage of MAT	Develop robust quarterly report for internal quality improvement strategies for SUD services (All levels)	October 2021	Completed
	Set standards for identification, initiation, and engagement. Educate and engage providers around these standards and implementation	April 2023	Completed
	Develop requirement for CCO's to have a mechanism to ensure that they have adequate capacity to serve those in their region around SUD services	April 2023	Completed
	Engage with CCO's around adequate capacity levels for MAT and their service areas	April 2023	Completed
	Develop standard range of client to clinician ratio	April 2023	Completed
	Develop provider review process around staffing levels	April 2023	Completed
	Develop more culturally relevant training for peer workers, including a tribal-specific course and Latino-specific course	April 2023	Completed
	Expand the number of diversity of culturally specific peers within the workforce	April 2023	Completed
Coverage of intensive levels of care in residential and inpatient settings	Develop robust quarterly report for internal quality improvement strategies for SUD services (All levels)	October 2021	Completed
	Set scope of work for the workforce regarding SUD crisis intervention services and establish reimbursement rate	April 2023	Completed
	Set standards for identification, initiation, and engagement. Educate and engage providers around these standards and implementation	April 2023	Completed
	Develop requirement for CCO's to have a mechanism to ensure that they have adequate capacity to serve those in their region around SUD services	April 2023	Completed
	Develop standard range of client to clinician ratio	April 2023	Completed
	Develop provider review process around staffing credentials	April 2023	Completed
	Develop more culturally relevant training for peer-delivered services workers, including a tribal-specific course and Latino-specific course	April 2023	Completed
	Expand the number of diversity of culturally specific peers within the workforce	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Coverage of medically supervised withdrawal management	Develop robust quarterly for internal quality improvement strategies for SUD services (All levels)	October 2021	Completed
	Set scope of work for the workforce regarding SUD crisis intervention services and establish reimbursement rate	April 2023	Completed
	Set standards for identification, initiation, and engagement. Educate and engage providers around these standards and implementation	April 2023	Completed
	Develop standard range of client to clinician ratio	April 2023	Completed
	Develop provider review process around staffing credentials	April 2023	Completed
	Develop requirement for CCO's to have a mechanism to ensure that they have adequate capacity to serve those in their region around SUD services	April 2023	Completed
Parity of Coverage in SUD service array	Oregon will meet with agencies that provide these services (funded through state funds and federal grants) to develop a structure and draft regulations for this service	April 2023	Completed
	Develop reimbursement rates for agencies to provide this service	April 2023	Completed
	The state will pursue a state plan amendment and Oregon Administrative Rule (OAR) changes to expand the use of case management for pre and post treatment and for community-based services and supports, such as housing and employment	April 2023	Completed
	Implement related state plan amendment service	April 2023	Completed

Interview participant assessment. On a five-point scale, with one being very unlikely and five being very likely, interviewees on average rated the state as a 3.3, ranging from 2 to 4.5, in likeliness to achieve Milestone 1 by the end of the waiver.

Participant Feedback on Milestone Progress

Many participants saw promising signs of progress towards this milestone. Organizations were able to boost hiring and retention pay as a result of the increase in daily residential payment rates implemented by OHA as part of their Medicaid Behavioral Health fee schedule adjustment in January 2022. The adjustment was in response to providers' expressed need and the availability of general funds previously used for IMD payments. The increase was noted as having a direct positive effect on client care and the ability to provide an array of services.

> *The payments are helping a lot… so by increasing those rates, it has really made a difference in the quality of staff that we can hire, the amount that we can pay the good staff that we have, which also improves their performance. And all of that equates to better service for the client.*

The new ability to bill for time spent engaging with individuals before assessment and treatment, and for community integration services (CIS) was viewed as beneficial to providers' financial viability. Some of the codes (CIS and targeted outreach) were developed to directly address waiver goals, while others were part of OHA's overall strategy to address providers' needs and increase access to treatment. Organizations invested considerable staff time in outreach, building relationships with clients, and integrating services, time that was not previously reimbursable.

> *...we literally spend hours upon hours, just trying to get a woman to walk in the door. And we don't get to bill for any reimbursement until she's actually spent a night.*

> *So our program is only 30 days long. We don't get a lot of time with our people. So she starts working on, you know, finding them clean and sober housing, helping them get squared away with any of their aftercare plans with mental health, primary care, SUD and outpatient, that sort of stuff. It's a busy time for her and it's nice to be able to bill a little bit at the end.*

Other promising signs of progress included improvement in MAT access, increased ability to provide outreach to get people into outpatient treatment, and increased availability and contributions of peer workers. One participant applauded the increased reimbursement for culturally specific facilities and staff.

> *... providing culturally appropriate services ... that's more expensive than a standard residential treatment program. We lost money on that program for [decades], which is exactly what institutional racism looks like in Oregon. And so only in April, in part because of the waiver, did we begin to see improved reimbursements for culturally specific services. So, I think that's a real breakthrough that I certainly want to honor and respect.*

Participant Feedback on Milestone Barriers

Access to withdrawal management and residential treatment facilities was insufficient

There continued to be a lack of adequate detox and residential beds for Oregon Health Plan clients, creating waitlists of one to two months for many programs and up to nine months for youth Medicaid members. Insufficient reimbursement rates and a lack of funding for capital projects were cited as contributing factors.

> *[With the prevalence of homelessness and the lethality of fentanyl], the stakes are higher than they've ever been for this level of care.*

> *Until they start providing capital funds to actually build new facilities...and until they make SUD [residential] reimbursement rates reflective of what it actually costs to deliver that service, I'm not terribly optimistic.*

Staffing shortages also continued to plague treatment facilities, adding to the lack of access.

> *I think the elephant in the room is going to be the staffing crisis. So that's going to continue to be a problem as we expand these levels of care across the entire continuum. That's not just going to be in the higher levels of care, that staffing crisis is going to continue to be a problem.*

One provider observed a pattern of individuals cycling through unsuccessful bouts of outpatient treatment when unable to access residential treatment. While at least one organization had some success using intensive outpatient for patients waiting for a residential bed, the collateral effects of insufficiently treated addiction were detrimental.

> *People who have not been able to get into residential treatment, cycle in and out of unsuccessful outpatient treatments, and progress further and further and further into their addiction and become more and more and more ill. Then they have children over those years that are born drug affected, that are raised in significantly dysfunctional households, that then are in significantly higher risk of developing addiction and mental health concerns themselves, and are cycling in and out of foster care and all of these other things.*

Specialty treatment capacity was insufficient

The lack of specialty facilities and trained staff for youth, parents, people with co-occurring disorders, and culturally-specific treatment was called out as a barrier on top of the overall shortage of beds. These populations face additional challenges in the recovery process and can be more successful in programs geared to their specific needs.

> *Oregon has zero detox facilities for youth. So it's hard to keep youth in treatment in general, it's just really difficult. It's even harder when you don't get to detox comfortably…*

> *You know, these women have had every conceivable bad thing that can happen to somebody happen to them…Their skill sets are very minimal. Many of them, we're building just sort of basic baby care skill sets here, never mind all of the other sort of activities of daily living sorts of skills. So it's an especially challenging segment of the population.*

A few participants highlighted the failure of the waiver to address co-occurring mental health and substance use disorders. Participants were encouraged by the increase in Certified Community Behavioral Health Clinics as an example of a state trend to improve the integration of mental health and substance use disorder services. Still, organizations rarely found clinicians experienced and qualified to treat co-occurring disorders and cited the lack of administrative integration as a barrier to providing quality coordinated care for this population.

> *I think just about any of our folks that come in have some co-occurring needs.*

> *But the issue continues to be finding master's level clinicians and always ones that actually do SUD and co-occurring, they're rare, relatively rare.*

Technical assistance for billing was insufficient

While the waiver created a new opportunity to bill for pre-engagement and CIS work, many participants had not yet been able to successfully bill for these services. They felt there was a lack of consistent communication, education, and technical assistance from OHA. There was considerable uncertainty and confusion around how to bill the new codes and what services counted. Additional barriers to use included different interpretations and potential claim denials by CCOs, the unfamiliarity of hourly services to providers accustomed to a daily rate, and a level of reimbursement insufficient

to justify the effort needed to bill successfully. Some reported continuing to engage in many hours of unreimbursed work due to these barriers.

> *… looking at that engagement code, and really thinking about what are the logistics for the program administratively to then be able to bill the code? So sometimes how it translates is that what it would take, the lift represents such an effort, that the new reimbursement is actually not worth the lift. And so it's easier to just not try to do it. You can't, it doesn't pencil out.*

Administrative burden was overwhelming

High administrative burden from OHA and CCOs was reported as a considerable barrier to improving access to care across all levels.

> *[OHA is] taking money away from service every time they put another administrative demand on providers or the CCOs.*

One participant questioned whether the continued increase in reporting, additional licensing, and data collection requirements was justified by any improvements in services or outcomes.

> *And that's the fundamental problem with admin burden is they started off with these little pieces of information, and then they've just layered on and layered on and layered on. And no one's really torn it down, saying, 'What do we actually need and what is just extraneous that we're not actually using?' And that's what's created the admin burden.*

All providers characterized the frequency of required authorizations as extremely time-consuming. For smaller organizations without as much administrative infrastructure and support as larger organizations the frequency of authorizations was especially burdensome.

> *But we're seeing the same thing, even at the outpatient level, where we're having to do more frequent authorizations. And oftentimes there could be denial.*

Adding to the burden of frequent authorizations were the differences between CCOs in their requirements and processes.

> *…their rules change from one authorization to the next or from one CCO to the next. For example, they provide a document for us to complete to provide the information and then down the road, they no longer want to use that document, they want us to provide something else… We 100% understand that it's our responsibility to provide the documentation for reauthorization. We also need consistency in what they are looking for and that's not present.*

Participants pointed to onerous regulations surrounding MAT as a barrier to access, inhibiting the expansion of this service. The cost of creating the necessary infrastructure and compliance levels for storing and dispensing medications made it difficult for facilities to provide medication in-house. One participant noted that the speed with which medication dosage may need to be increased for a client was often held up by "red tape," reducing the effectiveness of treatment and leading to an increase in patients leaving treatment early, against medical advice.

Milestone 2: Use of Evidence-based, SUD-Specific Patient Placement Criteria

Progress on critical metrics. Table 9 presents progress on the two metrics associated with Milestone 2. Medicaid Beneficiaries Treated in an IMD for SUD (per 1,000 member months) improved slightly but was classified as "no progress" because the improvement relative to baseline was smaller than 2 percent. The Average LOS in IMDs decreased slightly from 17.3 days to 16.6 days and remained consistent with the target (average LOS less than 30 days).

Table 9. Critical metric results for Milestone 2

Metric	Baseline	Midpoint	Absolute Change	Percent Change	Target	Direction	Progress
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	5.20	5.23	+0.03	+0.6%	↑	=	N
36. Average Length of Stay in IMDs (days)	17.3	16.6	-0.7	-4.0%	≤ 30 days	compliant	Y

Progress on implementation action items. All eight action items associated with Milestone 2 were completed (Table 10).

Table 10. Implementation action item results for Milestone 2

Action item category	Action item description	Date to be completed	Current status
Implementation of requirement that providers assess treatment needs based on SUD-specific, multi-dimensional assessment tools that reflect evidence-based clinical treatment guidelines		April 2023	Completed
Implementation of a utilization management approach such that (a) beneficiaries have access to SUD services at the appropriate level of care	Refine contract language with CCOs to include ASAM	April 2023	Completed
	Monitor CCO's to ensure prior authorization staff are adequately trained in ASAM criteria and SUD treatment services	April 2023	Completed
Implementation of a utilization management approach such that (b) interventions are appropriate for the diagnosis and level of care	Consult with the Department of Justice	October 2021	Completed
	Consult with providers and other stakeholders	April 2022	Completed
	Develop and implement policy and OAR amendments	October 2022	Completed
	Provide training to providers regulated by the new rules (in person, onsite technical assistance and webinar)	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Implementation of a utilization management approach such that (c) there is an independent process for reviewing placement in residential treatment settings	Develop requirements for CCOs	April 2022	Completed

Interview participant assessment. On a five-point scale, with one being very unlikely and five being very likely, interviewees on average rated the state as a 3.5, ranging from 2 to 5, in likeliness to achieve Milestone 2 by the end of the waiver.

Participant Feedback on Milestone Progress

The idea of standards and uniformity across organizations was generally supported and viewed as necessary to providing uniform and quality care.

> *… there does tend to be just in general, slippage between the criteria of, does this person have an alcohol use disorder, does this person have etc… and what does that even look like? Because I've seen two different providers give two totally different diagnoses.*

There was disagreement with the original decision to require the use of ASAM criteria because of expense, difficulties with system implementation, and its proprietary nature. The shift to requiring "ASAM-like" criteria was seen as a positive step towards easing the burden on many providers. In addition, over half of the participants' organizations were already using ASAM placement criteria so it was not seen as a particularly heavy lift for them.

Participant Feedback on Milestone Barriers

Integration and use of ASAM was time-intensive

Half of the participants noted that it would still be difficult with ASAM-like requirements to make changes to existing assessments, both functionally and administratively, particularly for smaller organizations. Integrating the criteria in an electronic health record (EHR) could be problematic and time-consuming. On top of low wages, staff shortages, and provider burnout, the labor required to achieve uniformity statewide for patient assessments was described as "salt in a wound." The time and effort it took to persuade OHA to amend the original decision to require ASAM criteria raised a concern that OHA undervalued provider expertise and did not trust providers to do their jobs. Given the variation in clarity, quality, and comprehensiveness of current assessments across the state, participants anticipated a long and arduous process for all providers to adopt ASAM-like assessments. Still, they looked forward to the increase in uniformity. Two participants reflected that the differences in the specific questions or summaries between provider assessments did not facilitate a smooth referral process.

> *I get some that are extremely vague or they don't really have that much info. And some of them have all the information in it. So, it's kind of hard to say, because different agencies have different assessments. And some of them aren't very good.*

Evidence-based practices were not always appropriate for all settings

While encouraged by the support for evidence-based practices in SUD treatment there was concern the practices might not be applied appropriately. Evidence-based practices were not always appropriate or practicable for all settings. For example, the evidence developed in urban settings may not be feasible or effective in rural settings or may not consider different cultural approaches to treatment. There was also concern about the applicability of using ASAM assessments for certain populations.

> *I think they got tied too much to the specific proprietary assessment. And that was not well thought through as to what are the consequences. The ASAM proprietary assessment is not a co-occurring assessment, it's not a culturally appropriate assessment. It's really for a fairly narrow set of folks.*

Milestone 3: Use of Nationally Recognized SUD-Specific Program Standards to Set Provider Qualifications for Residential Treatment Facilities

Progress on implementation action items. There were no metrics associated with Milestone 3. All eight action items associated with Milestone 3 were completed (Table 11).

Table 11. Implementation action item results for Milestone 3

Action item category	Action item description	Date to be completed	Current status
Implementation of residential treatment provider qualifications in licensure requirements, policy manuals, managed care contacts, or other guidance. Qualification should meet program standards in the ASAM Criteria or other nationally recognized, SUD-specific program standards regarding, in particular, the types of services, hours of clinical care, and credentials of staff for residential treatment settings	Consult with the Department of Justice	October 2021	Completed
	Consult with providers and other stakeholders	April 2022	Completed
	Provide training to providers regulated by the new rules (in person, onsite technical assistance and webinar)	April 2023	Completed
	Develop and implement policy and OAR amendments	October 2022	Completed
Implementation of a state process for reviewing residential treatment providers to ensure compliance with these standards	Update and implement the process for initial and renewal certification and licensure	April 2022	Completed

Action item category	Action item description	Date to be completed	Current status
Implementation of requirement that residential treatment facilities offer MAT onsite or facilitate access to MAT off-site	Consult with the Department of Justice	October 2021	Completed
	Consult with providers and other stakeholders	April 2022	Completed
	Develop and implement policy and OAR amendments	April 2023	Completed

Interview participant assessment. On a five-point scale, with one being very unlikely and five being very likely, interviewees on average rated the state as a 3.3, ranging from 2 to 5, in likeliness to achieve Milestone 3 by the end of the waiver.

Participant Feedback on Milestone Progress

Echoing their sentiments on Milestone 2, participants supported the idea of standards and uniformity across organizations. They viewed the enforcement of standard provider qualifications as critical to ensuring quality care and, equally importantly, the public perception of a competent SUD treatment system. It was seen as beneficial for the field and client care to have "*guardrails around what [a] person can do and how much supervision they would need.*"

Most felt that the pre-waiver status of residential treatment facilities in Oregon would assist the state in meeting Milestone 3. The similarity of existing residential treatment provider qualifications with ASAM provider qualifications, the role of the Mental Health and Addiction Certification Board of Oregon in setting certification standards for SUD professionals, the similarity to the requirements for Commission on Accreditation of Rehabilitation Facilities accreditation combined with the portion of facilities already accredited, and the conduct of regular audits by OHA all led several participants to guess that the milestones should be fairly easy to meet. It was therefore not viewed as truly "transformative" change.

Participant Feedback on Milestone Barriers

Licensing each level of care was perceived as burdensome

Attention was drawn to the administrative burden of certifying each level of care, especially for small organizations. Providers saw the need for licensing residential and higher levels of care separately. However, for lower levels of care they questioned the value gained in care consistency or improvement on top of regular state audits and certification.

> *So the administrative burden that comes with that is, I'm still shaking my head, I feel like it's insurmountable. We're a pretty small program, I don't have a ton of staff. And now I'm going to have to rewrite all of the rules for each level of care. And then I'm going to have to make a separate application for each level of care. And that's a lot. And that's all on me.*

MAT providers were in short supply

Some participants noted the shortage of MAT providers as a barrier to being able to comply with the residential facility requirement to provide MAT onsite or facilitate offsite access. The workforce shortage was an impediment both to hiring in-house MAT providers and to contracting with external

providers. One participant noted that their facility did not provide MAT in-house and could not accept patients taking MAT as they had no way to ensure the patient could continue their medication.

Rulemaking felt disconnected from the field

Participants pointed to policymakers' apparent lack of understanding of care delivery and provider operations on the ground. They saw a disconnect between the people making the rules and how things function in the real world.

> *I think that the hard part is that the people that write these rules, either have never provided services, or they've been out of it for so long, that they don't get it.*

The lack of understanding had contributed to untenable requirements, such as the requirement to initiate MAT within 72 hours of diagnosing a patient with OUD.

> *In the statute, it says, the second that they are identified as an opioid user, they have to have access to MAT, within 72 hours. It's like, get real. We don't even have the providers that could see somebody in 72 hours available, like it's at least two weeks out… And in what crazy world did that ever seem available, that we have the staffing to do that. And sometimes the person's not even ready to engage in MAT… So, a lot of the rules and mandates around it are insane, and they're never going to be met.*

Milestone 4: Sufficient Provider Capacity at Critical Levels of Care Including for MAT for OUD

Progress on critical metrics. Table 12 presents progress on the two metrics associated with Milestone 4. The number of SUD providers enrolled in Medicaid (Provider Availability) moved in the desired direction, increasing by 11.1% from baseline. The number of MAT providers enrolled in Medicaid (Provider Availability – MAT) similarly increased by 10.6 % from baseline.

Table 12. Critical metric results for Milestone 4

Metric	Baseline	Midpoint	Absolute Change	Percent Change	Target	Direction	Progress
13. Provider Availability (n)	20287	22542	+2255	+11.1%	↑	↑	Y
14. Provider Availability - MAT (n)	2350	2600	+250	+10.6%	↑	↑	Y

Progress on implementation action items. Eleven out of thirteen action items associated with Milestone 4 were completed (Table 13).

Table 13. Implementation action items for Milestone 4

Action item category	Action item description	Date to be completed	Current status
Completion of assessment of the availability of providers enrolled in Medicaid and accepting new patients in the following critical levels of care throughout the state (or at least in participating regions of the state) including those that offer MAT; Outpatient Services; Intensive Outpatient Services; MAT (medication as well as counseling and other services); Intensive Care in Residential and Inpatient settings; Medically Supervised Withdrawal Management	Assess current client to provider ratios for all levels of treatment	October 2021	Completed
	Create action plan to address deficits within the delivery system identify within the capacity study	April 2022	Completed
	Implement the plan to address the delivery system deficits	April 2023	Open
	Develop the appropriate client to provider ratios	April 2022	Completed
	Develop a plan to address any gaps in provider ratio	October 2022	Completed
	Begin to implement changes addressing the gaps in provider ratios that were identified in service area	April 2023	Completed
	Implement the capacity management and referral tracking data base for all SUD residential services (ASAM levels 3-4) including MAT and withdrawal management	April 2023	Completed
	Identify needs for the MAT in OTP and Office-based opioid treatment (OBOT) settings	April 2022	Completed
	Develop plan to meet needs of MAT in OTP and OBOT settings	October 2022	Completed
	Implement plan to address needs of MAT in OTP and OBOT settings	April 2023	Completed
	Assess the number of covered lives, availability of prevalence, incidents and diagnosis rates by region/CCO	April 2023	Open
Increase provider capacity across all levels	Assess the needs of the Healthcare workforce identified in the assessment	April 2023	Completed
	Develop the plan to address workforce issues to include activities such as (focus groups, partnerships with providers and CCOs, etc...)	April 2023	Completed

Interview participant assessment. On a five-point scale, with one being very unlikely and five being very likely, interviewees on average rated the state as a 3.2, ranging from 2 to 4.3, in likeliness to achieve Milestone 4 by the end of the waiver.

Participant Feedback on Milestone Progress

Efforts to expand MAT access relatively quickly were viewed as critical to combat the rise in fentanyl use across the state. There was wide variation in provider and client access to services. It was acknowledged that increasing access to MAT in Oregon was going to be a "long haul" that would likely extend beyond the waiver period.

Several participants noted that providers have become more open to the use of SUD medication as stigma and the perception of provider risk has lessened. Some organizations had prioritized expanding MAT services over the last few years with telehealth being an important catalyst. Telehealth capabilities allowed them to work with medication prescribers who did not reside in their region. Changes to federal laws, such as the X Waiver, and Behavioral Health Resource Network funding were also cited as instrumental to recent improvements in MAT access.

Participant Feedback on Milestone Barriers

Hiring and retaining staff were barriers to MAT access

While two participants described having drastically expanded MAT services through their organizations, most said that the shortage of providers had created a critical lack of access.

Although the stigma around providing SUD medication had lessened, almost half of participants reflected on how some stigma had endured. Some organizations only offered programs predicated on abstinence, and some prescribers still perceived authorizing medication as a liability. Two participants were aware of several potential MAT providers that did not envision ever becoming an OTP, so they did not see much of a pathway for expansion in MAT capacity.

> *There are just not enough bodies to do the work. Ultimately, the biggest issue with MAT is not having the prescribers to give [clients] the medication because of this perception of risk.*

MAT provider capacity and client access to services varied greatly by geographic region and level of care. Some counties had sufficient access to services while others were lacking. Transportation was cited as a main barrier in rural areas, hindering service delivery, especially for methadone and suboxone.

> *I would love to see not only the capacity to increase, but also just the ability to reach out to patients where they're at. For example, we have an MAT clinic in Seaside. But there's one bus a day that goes into Seaside and goes back out to Seaside and a lot of the patients there are from Astoria, and so you've got to get that bus, you've got to make that bus in order to get to the clinic. And so that's a huge barrier for people. Just that one shot a day to be able to get to your medication.*

Service delivery was disjointed

Although telehealth was noted as a facilitator of success for this milestone, one participant noted the limitations of telehealth-only MAT providers.

> *I think the challenge with the telehealth only MAT providers is they're only doing the prescriptions, they're not doing any of the other wraparound care. So if the purpose is only to provide the medication, telehealth does help with that 100%. If it's to provide the whole wraparound services that in my opinion should come with MAT to really have the best likelihood of success, then*

the telehealth doesn't really change that other than having another prescriber that can see you virtually.

One participant also reflected that medical providers who were not trained in addiction medicine can create a disconnect in coordinating service delivery and ensuring appropriate access across care settings.

I think just making sure that we have medical providers who are also very familiar with addiction, so I think that's one thing that we've noticed is, people who are doing physical health in the behavioral health field is great and important. People prescribing MAT obviously, very important. But then also just having medical staff that also have that training in addiction too because it seems like there's going be a big disconnect if we're working with medical providers who don't have that experience.

Milestone 5: Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD

Progress on critical metrics. Table 14 presents progress on the three metrics associated with Milestone 5, all of which moved in the desired direction. Improvements were substantial for two measures, Use of Opioids at High Dosage in Persons Without Cancer and ED Utilization for SUD.

Table 14. Critical metric results for Milestone 5

Metric	Baseline	Midpoint	Absolute Change	Percent Change	Target	Direction	Progress
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	2.4	2.1	-0.3	-12.5%	↓*	↓	Y
21. Concurrent Use of Opioids and Benzodiazepines (%)	7.1	6.9	-0.2	-2.8%	↓*	↓	Y
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	2.37	2.04	-0.33	-13.9%	↓	↓	Y

*Target provided by CMS; differs from target in state Monitoring Protocol

Progress on implementation action items. All action items associated with Milestone 5 were completed (Table 15).

Table 15. Implementation action item results for Milestone 5

Action item category	Action item description	Date to be completed	Current status
Implementation of opioid prescribing guidelines along with other interventions to prevent opioid abuse	Health Evidence Review Commission to align payment structure with prescribing guidelines	April 2023	Completed
	Provide greater behavioral health supports (technical assistance, education, etc.) for opioid prescribers and health systems. Especially in primary care and emergency settings to both assist patients in reducing total Morphine equivalent doses and identify SUD/OUD cases which may need individualized care	April 2023	Completed
Expanded coverage of, and access to, Naloxone for overdose reversal	Continue to distribute Naloxone in areas of high need	October 2021	Completed
	Continue cross-divisional collaboration at state and local level	April 2023	Completed
	Increase communication between partners around the alignment of payment structure as it relates to Naloxone to increase access to and penetration of the population at greatest risk and need	April 2022	Completed
	Continue to encourage use and provide technical assistance around Naloxone access, use and distribution to CCOs through the Transformation Center	October 2021	Completed
Implementation of strategies to increase utilization and improve functionality of PDMPs	Continue to collaborate with provider licensing boards	April 2023	Completed
	Educate and engage with provider organizations, CCOs, and healthcare prescribers to increase the number of registered individuals who utilize the system	April 2023	Completed
Other	Increase capacity of culturally-relevant peer-delivered services workforce	April 2023	Completed
	Increase the number of culturally-relevant trainings (including tribal) to be developed and provided statewide	April 2023	Completed
	Leverage opportunities to secure more funding (federal grants, federal opioid project funding, state funds etc.) to expand Opioid Rapid Response Project statewide	April 2023	Completed
	Workforce development efforts around community integration/ housing support specialists as Medicaid participating providers	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Milestone 5a			
Section I			
PDMP Functionalities			
Implementation of comprehensive treatment and prevention strategies to address Opioid Abuse and OUD that is: 1) Enhance the state's health IT functionality to support its PDMP; and 2) Enhance and/or support clinicians in their usage of the state's PDMP	Specify a list of action items needed to be completed to meet health IT/PDMP milestones identified. Include persons or entities responsible for completion of each action item. Include timeframe for completion of each action item	April 2023	Completed
Enhanced interstate data sharing to provide prescribers a more comprehensive prescription history for patients with prescriptions across state lines	Oregon PDMP will continue conversations states as needed and continue to participate in data hub meetings. At least once a year contact will be made, more as needed and available.	April 2023	Completed
	At least once a year contact will be made, more as needed and available.	April 2023	Completed
Enhanced "ease of use" for prescribers and other state and federal stakeholders	PDMP will collaborate with health IT Commons and other stakeholders to: Educate on certain registration and technical thresholds required for integration of prescriber health IT systems with PDMP	April 2023	Completed
	Integrate most prescriber systems (representing 16K prescribers and 4 pharmacy chains) with PDMP. Contact will be made no less than annually but will be done as needed	April 2023	Completed
	PDMP will engage with the PDMP Advisory Council and PDMP Integration Steering Committee, no less than annually but are scheduled quarterly and as needed, to develop "ease of use" strategies (enhancements, education, etc.) for prescribers	April 2023	Completed
Enhanced connectivity between the state's PDMP and any statewide, regional or local HIE	PDMP and health IT Commons will continue to work with Oregon's Community HIEs to integrate with PDMP	April 2023	Completed
	PDMP will work with the health IT Commons, PDMP Integration Steering Committee, and HIE stakeholders to continue to assess enhancements which support clinicians use of HIE to access PDMP data (delegates, training, etc.); contact will be made no less than annually but will be done as needed	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Enhanced identification of long-term opioid uses directly correlated to clinician prescribing patterns	PDMP will convene the Clinical Review Subcommittee with a quorum to redefine and update thresholds for risky prescribing at minimum once per year	April 2023	Completed
	PDMP will continue to work with licensing boards to ensure that licensees are registered with the PDMP as mandated by statute; contact will be made no less than annually but will be done as needed and reviewed by the PDMP Advisory Committee quarterly	April 2023	Completed
	The PDMP will continue to promote the continuing medical education resource to stakeholders and enhance education and resources provided to the highest prescribers	April 2023	Completed
Current and Future PDMP Query Capabilities			
Facilitate the state's ability to properly match patients receiving opioid prescriptions with patients in the PDMP (i.e. the state's master patient index strategy with regard to PDMP query)	Oregon State Statute does not currently allow for this exchange of information – OHA Government Relations and PDMP staff continue to monitor legislation as it emerges – all potential legislative action monitored as a course of business through the PDMP Advisory Committee, quarterly	April 2023	Completed
	The PDMP will continue to engage with the Governor's Opioid Epidemic Taskforce, around the topic of allowing data sharing with the Medicaid program or collection of additional fields. As appropriate and in alignment with meeting agendas and topics	April 2023	Completed
	PDMP will follow any future statute changes from the legislature to enable matching of PDMP and Medicaid data or to allow submission of additional data fields, as available	April 2023	Completed
	The Oregon PDMP master patient index strategy is developed by the AWARxE platform vendor (Appriss) and is primarily the responsibility of the vendor. PDMP staff will work with the vendor to incorporate additional data fields required by any statute changes, as required and available	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Use of PDMP – Supporting Clinicians with Changing Office Workflows / Business Processes			
Develop enhanced provider workflow / business processes to better support clinicians in accessing the PDMP prior to prescribing an opioid or other controlled substance to address the issues which follow	PDMP will collaborate with health IT Commons, PDMP Integration Steering Committee, and other stakeholders as needed to: 1) Educate on certain registration and technical thresholds required for integration of prescriber health IT systems with PDMP; 2) Integrate most prescriber systems (representing 16K prescribers and 4 pharmacy chains) with PDMP; 3) Share best practices and provide education on leveraging integrated workflows to support informed prescribing of controlled substances; Contact will be made no less than annually but will be done as needed and reviewed by the PDMP Advisory Committee quarterly	April 2023	Completed
Develop enhanced supports for clinician review of the patients' history of controlled substance prescriptions provided through the PDMP—prior to the issuance of an opioid prescription	PDMP staff will collaborate with health IT Commons, PDMP Integration Steering Committee, and other stakeholders as needed to: 1) Enable PDMP to be pushed through the emergency department information exchange (EDIE) for hospitals who have already integrated the EDIE solution into their EHR; 2) Support rural hospitals who wish to integrate EDIE into their EHR through a grant provided by OHA and the Oregon Association for Hospitals and Health Systems; Contact will be made no less than annually but will be done as needed and reviewed by the PDMP Advisory Committee quarterly	April 2023	Completed
Master Patient Index / Identity Management			
Enhance the master patient index (or master data management service, etc.) in support of SUD care delivery	Oregon State Statute does not currently allow for this exchange of information – OHA Government Relations and PDMP staff continue to monitor legislation as it emerges – all potential legislative action monitored as a course of business through the PDMP Advisory Committee, quarterly	April 2023	Completed
	The PDMP will continue engagement with the Governor's Opioid Epidemic Taskforce, around statute changes required to allow data sharing with the Medicaid program or collection of additional fields, as available	April 2023	Completed
	The PDMP will follow any future statute changes that allow data sharing between PDMP and Medicaid to enhance the state master patient index in support of SUD care delivery, as available	April 2023	Completed
	PDMP staff will work with the vendor to incorporate additional data fields required by any statute changes, as available	April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Overall Objective for Enhancing PDMP Functionality & Interoperability			
Leverage the above functionalities / capabilities / supports (in concert with any other state health IT, technical assistance or workflow effort) to implement effective controls to minimize the risk of inappropriate opioid overprescribing—and to ensure that Medicaid does not inappropriately pay for opioids	PDMP will collaborate with health IT Commons, PDMP Integration Steering Committee, and other stakeholders as needed to: 1) Register CCO Medical Directors and Dental Directors if legislation is passed; 2) Educate on certain registration and technical thresholds required for integration of prescriber health IT systems with PDMP; 3) Integrate a majority of prescriber systems (representing 16K prescribers and 4 pharmacy chains) with PDMP; 4) Share best practices and provide education on leveraging integrated workflows to support informed prescribing of controlled substances. Contact will be made no less than annually but will be done as needed and reviewed by the PDMP Advisory Committee quarterly	April 2023	Completed
Section II			
Oregon has enough health IT infrastructure and ecosystem at every appropriate level to achieve the goals of the demonstration		October 2021	Completed
Oregon's SUD Health IT Plan is aligned with the state's Medicaid Health IT Plan and is a component of Oregon's Behavioral Health IT Plan. Oregon is currently initiating modernization efforts on its Behavioral Health IT systems, including SUD IT systems, and will be building a cloud data warehouse, inbound and outbound data interfaces, and longitudinal assessment platforms. This work is a component of the broader Medicaid Health IT Plan which includes Medicaid Modularity and migration of HITECH Act funded systems into the Medicaid Enterprise System.		April 2023	Completed

Action item category	Action item description	Date to be completed	Current status
Section III			
Oregon will include the applicable standards referenced in the Office of the National Coordinator for Health Information Technology Interoperability Standards Advisory (ISA) and 45 CFR 170 Subpart B in a future amendment to the CCO contract. The opportunities to add the SUD waiver requirements to the CCO contract are through an optional amendment in mid-2021 for CCOs that choose early implementation and through the annual restatement for contract year 2022 whereby implementation will be mandatory for all CCOs. Oregon's most recent procurement for CCO contracts occurred in 2019, with contracts awarded for the period of 2020-2024; Oregon does not anticipate any need to reprocure CCO contracts during the SUD waiver implementation period.		October 2021	Completed

Interview participant assessment. On a five-point scale, with one being very unlikely and five being very likely, interviewees on average rated the state as a 3.9, ranging from 2.5 to 5, in the likelihood of achieving Milestone 5 by the end of the waiver period.

Participant Feedback on Milestone Progress

Most participants shared at least one example of progress related to this milestone. They acknowledged state successes in supporting access to an array of services, specifically peer support workers, medication prescriptions, and culturally relevant services. Half of all participants mentioned that their organizations could supply more Naloxone to clients than in the past, with two specifically mentioning that the waiver had improved the ability to obtain Naloxone and reduced the administrative burden of providing it to clients.

> *I can see improvements in the system. Naloxone has been much more accessible and available. Before there were a lot of requirements on tracking who it's going to and how many people are taking it, whereas now it feels like there's less administrative burden to pass it out to somebody.*

Participant Feedback on Milestone Barriers

Prevention efforts were minimal

Two participants expressed concern about the scarcity of prevention activities oriented towards primary or secondary strategies. Such activities were viewed as vital to the state's success in decreasing the prevalence of SUD.

> *That's where we're missing the boat, is doing some upstream, either primary or secondary prevention. Because all of those tasks that are listed are at the very best tertiary prevention, but moving into intervention phases. And while I think that's important, we're not going to address the opioid crisis, or really the substance use disorder crisis generally, until we can figure out how to fund actual prevention services. And that's going to continue to be a problem, because there's no Medicaid mechanism to fund prevention.*

Restrictions on coverage for Naloxone persisted

Despite observed gains in Naloxone access and distribution, medication remained expensive, and organizations could not bill for the Naloxone distributed at their facilities. Requiring clients to physically go to a pharmacy to fill a Naloxone prescription was noted as a barrier to access.

> *…every person on Oregon Health Plan can get on naloxone free of charge and they just need to go to the pharmacy. Our clients won't do that. Very few of them will actually go to the pharmacy just to request naloxone, wait, out themselves as somebody that needs naloxone. It's just not going to happen.*

Fentanyl and polysubstance use were on the rise

Five participants called attention to recent increases in fentanyl and polysubstance use, which had made treatment and recovery longer and more difficult for many clients.

One problem that we see, you know, like our OTP, for example, is that we provide methadone or buprenorphine on a daily basis to folks that come in there. But there's still so much use that takes place on top of that, fentanyl included. But also, we still see a lot of meth that's being used and sold in amongst that population that goes into our OTP. And that's discouraging. That's pretty tough to see that happen.

Three participants reflected that focusing on a specific drug could detract from attention and efforts to improve prevention and treatment for abuse of other drugs. They believed the intense focus on opioids in the past decade had masked a rise in abuse of other substances.

We have a thing that we do in this country where we chase the drug. So whatever drug is the drug that's creating the most havoc in our country, that's the drug we prioritize. And when we do that, we don't look at all the other drug abuse that's happening. And we've been doing that for a long time, which is why methamphetamine and cocaine abuse in our country are on the rise. And so I guess, if I wished anything, I wish that we would stop doing that. And prioritize making sure that there's access to care and care available for all of the drugs of abuse.

Milestone 6: Improved care coordination and transitions between levels of care

Progress on critical metrics. Table 16 presents progress on the four metrics associated with Milestone 6. The four metrics are divided into 13 sub-metrics. Six metrics moved in the desired direction, while seven metrics did not. Of those that did not, one metric (Readmissions Among Beneficiaries with SUD) improved slightly, but less than 2 percent. The other six metrics moved in the opposite direction of the target. Changes were small to moderate for all measures.

Table 16. Critical metric results for Milestone 6

Metric	Baseline	Midpoint	Absolute Change	Percent Change	Target	Direction	Progress
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	35.4	36.7	+1.3	+3.7%	↑	↑	Y
15.2. Engagement of Treatment for Alcohol Abuse or Dependence (%)	18.9	19.5	+0.6	+3.2%	↑	↑	Y
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	56.0	59.1	+3.1	+5.5%	↑	↑	Y
15.4. Engagement of Treatment for Opioid Abuse or Dependence (%)	35.0	35.7	+0.7	+2.0%	↑	↑	Y
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	30.4	30.2	-0.2	-0.7%	↑	=	N
15.6. Engagement of Treatment for Other Drug Abuse or Dependence (%)	14.5	14.2	-0.3	-2.1%	↑	↓	N
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	36.2	37.7	+1.5	+4.1%	↑	↑	Y
15.8. Initiation of Treatment for Total AOD Abuse or Dependence (%)	19.2	19.6	+0.4	+2.1%	↑	↑	Y
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	14.7	13.9	-0.8	-5.4%	↑	↓	N
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	25.6	25.4	-0.2	-0.8%	↑	=	N
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	44.1	41.8	-2.3	-5.2%	↑	↓	N
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	60.1	58.0	-2.1	-3.5%	↑	↓	N
25. Readmissions Among Beneficiaries with SUD (%)	16.5	16.4	-0.1	-0.6%	↓	=	N

Progress on implementation action items. All three action items associated with Milestone 6 were completed (Table 17).

Table 17. Implementation action item results for Milestone 6

Action item category	Action item description	Date to be completed	Current status
Implementation of policies to ensure residential and inpatient facilities link beneficiaries with community-based services and supports following stays in these facilities	Specify a list of action items needed to be completed to meet milestone requirements. Include persons or entities responsible for completion of each action item. Include timeframe for com-pletion of each action item	April 2023	Completed
Creation and implementation of additional policies to ensure coor-dination of care for co-occurring physical and mental health condi-tions	Provide support to CCOs through technical assistance and train-ing to increase capacity and quality of SUD care transitions	April 2023	Completed
	CCO 2.0 includes language requiring CCOs use hospital event notifications and make them - and HIE for care coordinating - accessible to primary care, behavioral health, and dental organi-zations	April 2023	Completed

Interview participant assessment. On a five-point scale with one being very unlikely and five being very likely, interviewees on average rated the state as a 3.5, ranging from 2 to 5, in likeliness to achieve Milestone 6 by the end of the waiver.

Participant Feedback on Milestone Progress

Most participants underscored the importance of care coordination to a client's successful recovery. Care coordination was especially important for clients with co-occurring disorders, who may be more likely to need services across numerous providers and clinics. Four participants shared examples of how their organizations incorporated more integrative services and worked with various external partners to increase access to services. They had seen more collaboration between organizations and community engagement during the waiver period.

> *There's been more people collectively working on problems outside of organizations. Now we have more community engagement, and we're not trying to solve problems in a silo.*

Participants from six of the organizations interviewed were actively billing for the new CIS. They emphasized the value of the additional reimbursement to fund operations and free up money to be used elsewhere in their organizations. For example, the additional reimbursement allowed organizations to hire more staff, return to full capacity post-COVID, provide better support for client transitions, and help cover the costs of care for uninsured clients.

Participant Feedback on Milestone Barriers

Care coordination required time outside of care delivery that participants did not have

There was a desire to balance administrative demand with effective care coordination. Large caseloads, understaffing, and lack of clinician training made coordination across facilities challenging. Two participants reflected that care coordination, even within the same organization, required intentional work such as proactive care team communications and supervision.

Three participants reflected on whether providers or CCOs should ultimately be responsible for care coordination. CCOs did not always conduct care coordination for clients, particularly when cross-county coordination was required. OHA was encouraged to hold CCOs more accountable to the care coordination mandates in their contracts.

Interoperability between different EHR systems was limited

Three participants said that information sharing was difficult between organizations that used different electronic health record systems or that primarily used paper-based records.

> *One of the struggles between levels of care is that we use different EHRs and different systems. Some SUD programs are still paper. We only recently got our outpatient program to start charting in the EHR two months ago.*

In the context of limited state capacity, it was noted that care coordination was often hampered by a lack of appropriate levels of care for clients to move into. Three participants reported that they would appreciate a concerted effort from the state on the milestone, specifically for HIE and intensive care coordination. One participant noted the problems caused by referring a patient from one provider to another.

> *Can the state just not say like, 'Hey, here's the EHR y'all are gonna use, here's the forms y'all are gonna use.' So that all of us are getting the same information, we all know the process, because we're getting an assessment for residential from one entity, and it's like total crap, you can't really tell anything from it. And then you'll get a 20-page referral from another entity.*

Technical assistance on qualifying services for the new CIS codes was scarce

Regardless of whether their organizations had leveraged the new CIS billing codes, there was still uncertainty and confusion around how to bill the new codes and what services qualified. Five participants lamented the limited technical assistance and guidance from OHA. Varying interpretations across CCOs of what was allowable under the codes posed administrative burdens for seeing patients from more than one CCO.

> *The biggest issue with being able to utilize those [CIS] codes is getting fair and accurate information. [With various OHA departments and CCOs] it's like we have three different entities giving three different variations of what their interpretation of the code is. These codes do not feel available to us because when we inquire and request technical assistance, we do not receive it. We provide those services for free and avoid billing because we just don't have that technical assistance guidance manual that would give us the confidence to bill.*

There were additional limitations around billing for peer providers, like being unable to bill for drop-in hours, that did not always align with best practices.

Information-sharing regulations impeded efficient care coordination

Information-sharing regulations and lack of HIE infrastructure added to the administrative burden for provider staff. Two participants mentioned the Code of Federal Regulations Title 42 Part 2, which put constraints on information sharing with required releases of information. The requirement to sign these releases in person could pose barriers for clients and inhibit timely care coordination. One participant said that a language change in the OAR necessitated a language change in the organization's EHR system, which was time-consuming.

Assessment of Overall Risk of Not Meeting Milestones

For each milestone, we used the criteria presented in Table 6 to assess the risk, by data source, of not meeting the milestone. We assigned the overall risk of not meeting a given milestone based on the highest risk indicated out of the three data sources. Based on these criteria, we assigned Milestones 1 and 6 a high risk of not meeting the milestone based on interview participant feedback. We assigned Milestone 2 a medium risk based on critical metric performance and participant feedback, and Milestone 4 a medium risk based on participant feedback. We assigned Milestones 3 and 5 a low risk.

Table 18 summarizes the findings for each milestone from each data source and presents our risk assessments.

Table 18: Summary of overall risk of not achieving demonstration milestones

Milestone	Metric goals met	Action items complete	Average rating*	Key themes from stakeholder feedback	Risk level
1	4/7	100% 42/42	3.3	• Progress seen in increased reimbursement for residential treatment, engagement before residential treatment, culturally specific services, and telehealth • Access to withdrawal management and residential treatment facilities was insufficient • Specialty treatment capacity was insufficient • Technical assistance for billing was insufficient • Administrative burden was overwhelming *General perspectives around Oregon's SUD treatment system and waiver implementation* • Severity of illness was increasing • Policymaking was fragmented • Residential bed capacity was insufficient • Hiring and retaining qualified residential staff was a challenge • The impacts of the COVID-19 PHE lingered • Waiver communications were not ideal	High

Milestone	Metric goals met	Action items complete	Average rating*	Key themes from stakeholder feedback	Risk level
2	1/2	100% 8/8	3.5	• Support for uniform standards • Integration and use of ASAM was time-intensive • Evidence-based practices were not always appropriate for all settings	Med
3	NA	100% 8/8	3.3	• Support for uniform standards • ASAM-like preferred over ASAM • Licensing each level of care was perceived as burdensome • MAT providers were in short supply • Rulemaking felt disconnected from the field	Low
4	2/2	85% 11/13	3.2	• MAT access and availability vary widely across counties • Stigma and perception of risk around providing MAT had decreased but persisted • Hiring and retaining staff were barriers to MAT access • Service delivery was disjointed	Med
5	3/3	100% 36/36	3.9	• Organizations have been able to provide more Naloxone • Prevention efforts were minimal • Restrictions on coverage for Naloxone persisted • Fentanyl and polysubstance use were on the rise	Low
6	6/13	100% 3/3	3.5	• Appreciation for new CIS codes • Care coordination required time outside of care delivery that participants did not have • Interoperability between different EHR systems was limited • Technical assistance on qualifying services for the new CIS codes was scarce • Information-sharing regulations impeded efficient care coordination.	High

** Average participant rating of the likelihood of the state achieving the milestone. 1 = very unlikely; 5 = very likely*

Budget neutrality assessment

Currently, CMS requires all section 1115(a) demonstrations to be budget neutral to the federal government. This condition is met if spending under the waiver demonstration ("with waiver" expenditures) does not exceed projected hypothetical spending in the absence of the waiver demonstration ("without waiver" expenditures).

To assess budget neutrality, we requested the budget neutrality workbook from OHA, which is part of their monitoring requirements, and which reports on "with waiver" and "without waiver" expenditures.

OHA communicated with us that it was currently not able to provide us with the budget neutrality workbook. Therefore, it was not feasible for us to conduct a budget neutrality assessment for this Mid-Point Assessment.

Next Steps

Overview

In this chapter, we describe our recommendations for the areas in which Oregon is at medium or high risk of not meeting milestones and any planned modifications by the Oregon Health Authority (OHA) to their waiver implementation plan. Recommendations are for OHA and coordinated care organizations (CCOs), by milestone, based on metric findings and interview participant input.

Independent Assessor Recommendations for Moderate or High-Risk Milestones

Milestone 1: Access to Critical Levels of Care for Opioid Use Disorder (OUD) and other Substance Use Disorders (SUDs)

- **Consider adding standardization requirements to future CCO contracts** to reduce the administrative burden placed on providers interacting with multiple CCOs. Provider resources spent on maintaining compliance with multiple CCOs and the Division of Medical Assistance Programs requirements could be better allocated to client care delivery. Specifically:
  - Streamline and align service authorization processes across CCOs.
  - Align coding and billing procedures across CCOs.
  - Encourage CCOs to relax restrictions on peer-delivered services to align with best practices for this kind of care, such as allowing providers to bill for drop-in visits.
  - Establish guidelines related to minimum length-of-stay (LOS) authorization for patients, including consideration of CCO quality metrics to ensure LOS determinations are achieving good outcomes.
- **Provide ongoing, robust outreach and technical assistance around:**
  - Behavioral health coding and billing, particularly for community integration services (CIS) and pre-engagement, ideally as a collaboration between OHA and CCOs. Several providers refrained from using the new billing codes because they were unsure of how to use them and didn't want to have claims denied by CCOs.
  - Augmenting the SUD workforce by encouraging the full scope of practice for qualified mental health professionals, in particular for integrating mental health and SUD care. For instance, OAR 309-019 allows a qualified mental health professional with an appropriate number of hours of SUD training to provide SUD services for a limited time without being a certified alcohol and drug counselor. It was noted that not everyone was aware of this policy, so more effective dissemination and promotion could help expand workforce potential among qualified mental health professionals.

- **Evaluate SUD treatment reimbursement rates,** particularly for residential treatment, and continue to look for ways to ensure they "are sufficient to enlist enough providers so that care and services are available under [Medicaid] at least to the extent that such care and services are available to the general population in the geographic area," as required by Section 1902(a)(30)(A) of the Social Security Act. Participants reported an ongoing need to augment their funding through grants to provide basic services and referred to the greater availability of care for patients with commercial insurance compared to patients with Medicaid.
- **Continue to monitor measures related to Milestone 1 that did not show progress** (Outpatient Services, Medication-Assisted Treatment (MAT), and Continuity of Pharmacotherapy for Opioid Use Disorder (OUD)) and continue the implementation task of engaging with CCOs to improve MAT capacity.

Milestone 2: Use of Evidence-based, SUD-specific Patient Placement Criteria

- **Consider convening a workgroup of providers** to identify ways OHA and CCOs could reduce the burden on providers to adopt a new assessment, conduct regular training, and research best practices for modifying assessments to account for dual diagnosis or cultural needs.
- **Continue monitoring utilization and LOS for residential treatment facilities.** Rates for the number of Medicaid Beneficiaries Treated in an IMD for SUD improved, but the change was very small and thus classified as "no progress." Average LOS in IMDs was well below the target at the baseline and further decreased at the mid-point. While this development was consistent with the target, which required the average LOS to remain below 30 days, it may raise concerns that LOS could be inadequate for some patients.

Milestone 4: Sufficient Provider Capacity at Critical Levels of Care including for MAT for OUD

- **Continue outreach to providers to reduce the stigma of MAT** and consider incentives to recruit new providers to become substance use medication prescribers, especially for buprenorphine and other non-methadone options.
- **Focus on how to support MAT access in non-outpatient opioid treatment programs (OTPs) and office-based opioid treatment (OBOT) settings,** including ways to collaborate with MAT providers on wraparound services and care coordination.
- **Continue to allow the use of telehealth in MAT,** especially in rural areas where transportation is a major barrier to access.

Milestone 6: Improved Care Coordination and Transitions between Levels of Care

- **Consider convening a workgroup to assess provider needs to improve information exchange and care coordination**. Providers stated that information-sharing regulations, shifts in Oregon Administrative Rules, and a lack of health information exchange (HIE) infrastructure imposed hurdles when providing care across settings. One participant specifically called out the need for support with electronic signature software, such as DocuSign, that would help speed up the intake and referral process and reduce burdens for clients and providers alike. HIE investments could also help align existing systems and enable the shift from paper to electronic health records to help increase the accessibility of information and facilitate care coordination. Such investments would be a considerable lift for the state and would take a long time to fully implement. While HIE investments should be a consideration for future planning, OHA could seek provider feedback about other difficulties related to information exchange and care coordination and potential remedies actionable in the short term.

- **Clarify and enforce care coordination roles and responsibilities of CCOs.** Participants saw a lack of continuity of care when members of one CCO had to receive services in another region, impeding the likelihood of successful recovery. Clear messaging from OHA to CCOs and providers alike that outlines where the responsibility lies for each aspect of care coordination and transitions between levels of care would support positive outcomes.
- **Continue to monitor measures related to Milestone 6 that did not show progress,** such as Follow-up after Emergency Department Visit for Alcohol and Other Drug (AOD) Dependence or Mental Illness. Efforts to improve care coordination may aid in moving these metrics in the desired direction.

Table 19 summarizes our recommendations for medium- and high-risk milestones. The Table also includes state responses and planned modifications to waiver implementation.

Table 19: Summary of recommendations for medium-and high-risk milestones and state responses

Milestone	For milestones at medium or high risk, independent assessor's recommended modifications	State responses and planned modifications
1	• Add standardization requirements to future CCO contracts to reduce the provider administrative burden when interacting with multiple CCOs. • Provide ongoing, robust outreach and technical assistance around behavioral health coding and billing, and augmenting the SUD workforce by encouraging the full scope of practice for qualified mental health professionals as providers. • Evaluate SUD reimbursement rates and continue to look for ways to ensure they meet statutory requirements. • Continue to monitor measures related to Milestone 1 that did not show progress.	The state has taken the following actions to support the recommendations: • Engaged providers and CCOs in a statewide tackling administrative burden workgroup, initiated summer of 2023 • OHA has engaged providers in quarterly technical assistance sessions • OHA implemented a 30% increase to SUD providers in January 2022, a net 30% increase for all providers of SUD and mental health services, implemented a 3.4% increase for providers in October 2023, and will complete a 3.4% increase in July 2024. • OHA also opened up ASAM 3.7R LOC for fee-for-service • OHA provided over $100 Million in vacancy payments to SUD and Mental Health residential providers starting in Q4 of 2020 and ending in Q2 2023 • OHA continues to monitor claims and encounter data to support Milestone
2	• Convene a workgroup of providers to identify ways OHA and CCOs could reduce burden on providers. • Continue monitoring IMD utilization and LOS.	• OHA has engaged providers in a tackling administrative burden workgroup, initiated in the summer of 2023 • OHA monitors claims and encounter data, including LOS requirements and reports to CMS on a demonstration year basis

Milestone	For milestones at medium or high risk, independent assessor's recommended modifications	State responses and planned modifications
4	• Continue outreach to providers to reduce the stigma of MAT and consider incentives to recruit new providers to become medication prescribers. • Focus on how to support MAT access in non-OTP programs, OBOT settings. • Continue to allow the use of telehealth in MAT.	• OHA will continue supporting MAT in non-OTP and OBOT settings • OHA has implemented telehealth as a viable permanent option, paying at parity with in-person services • OHA will continue to host provider engagement technical assistance opportunities for providers to ease the burden of billing for Medicaid Services
6	• Convene a workgroup to assess provider needs to improve information exchange and care coordination. • Clarify and enforce care coordination roles and responsibilities of CCOs. • Continue to monitor measures related to Milestone 6 that did not show progress.	• OHA will continue to monitor the measures in Milestone 6 that did not show improvement between Year 1 and Year 2 of the waiver • OHA will consider provider workgroups in a meaningful way, given providers concerns with administrative burden • OHA has recently revised care coordination rules and responsibilities for CCOs, and will monitor effectiveness through CCO quality assurance activities

Description of areas at risk of not meeting milestones and list of proposed activities for addressing deficiencies

Based on our findings we identified two areas at high risk of not meeting targets: access to critical levels of care for OUD and other SUDs (Milestone 1) and improved care coordination and transition between levels of care (Milestone 6). For Milestone 1, the state has convened a workgroup for providers and CCOs to address administrative burden, offered technical assistance sessions for providers, increased reimbursement rates, opened up ASAM level of care 3.7 for fee-for-service payments, and provided vacancy payments to SUD and mental health residential providers. The state further plans another reimbursement increase in 2024. For milestone 6, the state proposes to monitor effectiveness of revised care coordination rules and responsibilities for CCOs, and to consider offering provider workgroups. The state also proposes to monitor data and measures relevant for these two milestones.

We identified two areas at medium risk of not meeting targets: use of evidence-based, SUD-specific patient placement criteria (Milestone 2), and sufficient provider capacity at critical levels of care, including for MAT for OUD (Milestone 4). To address these deficiencies, the state has engaged providers in a workgroup to reduce administrative burden and implemented telehealth as a permanent option for MAT. The state will also continue its support for MAT in non-OTP and OBOT settings, monitor relevant data and measures, and continue hosting provider engagement technical assistance opportunities.

Independent Assessor Description

The Center for Health Systems Effectiveness at Oregon Health & Science University is a research organization that uses economic approaches and big data to answer pressing questions about health care delivery. Our mission is to provide the analyses, evidence, and economic expertise to build a more sustainable health care system. Our publications do not necessarily reflect the opinions of its clients and funders.

The Center for Health Systems Effectiveness conducted a fair and impartial assessment and prepared an objective assessment report. We relied on the following resources to guide the assessment:

- Medicaid Section 1115 Substance Use Disorder (SUD) and Serious Mental Illness and Serious Emotional Disturbance (SMI/SED) Demonstrations MPA Technical Assistance Version 1.0 (October 2021);
- Oregon Health Plan Substance Use Disorder 1115 Demonstration, Approval Period: April 8, 2021 through March 31, 2026, Attachment E SUD Evaluation Design;
- Medicaid Section 1115 Substance Use Disorder Demonstrations: Technical Specifications for Monitoring Metrics Version 5.0, September 2022;
- Responses from the CMS 1115 Waiver Technical Assistance team (1115MonitoringandEvaluation@cms.hhs.gov) to clarification questions regarding MPA requirements; and
- Consultation with OHA limited to:
    - Requests for and receipt of data such as Medicaid claims, list of Medicaid-enrolled IMDs, contact information for behavioral health directors of CCOs, or implementation updates,
    - Receipt of policy documents, fee schedules, training sessions, or other resources available regarding Medicaid SUD services,
    - Dialogue to ensure the calculation of metrics was as similar as possible between OHA monitoring reports and the MPA,
    - Responses to clarification questions regarding interviewee statements or references, and
    - Dialogue to establish the method and timing of the delivery of the report drafts.

The Center for Health Systems Effectiveness has no conflict of interest regarding the evaluation overall or this report specifically.

Stephan Lindner

Interview Guide

Oregon SUD Waiver Evaluation – Round 1 Interview Guide

The questions below are the general topic areas we will explore with interview participants. Not all of these questions will be asked of all participants.

Introduction

Thank you for agreeing to participate in this interview. My name is ***[state name]*** from the Oregon Health & Science University Center for Health Systems Effectiveness. My colleague ***[state name]*** is also here to observe and take notes. We are working with the Oregon Health Authority to understand the Medicaid 1115 Substance Use Disorder Waiver's early implementation successes and challenges, as well as progress towards the achievement of Waiver milestones. We're speaking with people around the state to understand experiences from different organizational and professional perspectives. The information we gather will be used to inform our evaluation of OHA's progress with waiver implementation, as well as provide insight and context to the quantitative analysis.

- Did you have a chance to review the information sheet? Do you have any questions?
- Interview recordings will be professionally transcribed, and any information in the interview that could be used to identify you will be removed from the transcripts. These transcripts will only be seen by the research team.
- Start recording: Do I have your permission to record this interview?

Questions

The waiver was implemented in April 2021. These questions are related to your experiences after the implementation date.

1. **Please tell me about yourself.**
    a. What is your role and title?
    b. What is your background in SUD service delivery?
2. **In general, what is your awareness of the Oregon SUD waiver, its goals, and the related policy changes?**
    a. What has been your experience with state communications and outreach about the waiver?
    b. What form did they take? (e.g., group email, individual outreach, webinar)
    c. Were they helpful and relevant for your organization?
3. **Have you or your organization utilized any of the new policies related to billing codes and Medicaid payments for IMD stays?**

a If not, why? (e.g., weren't aware of them, insufficient infrastructure, etc.)

4 **What effects, if any, have you seen from the waiver so far? For example:**

a How has the waiver affected organizational operations or your daily work?

b How has it affected clients and access to care?

5 **What is your experience with the role that IMDs play in the continuum of SUD care, and what is the significance of this role?**

6 **How do you see the waiver fitting into Oregon's overall plan to improve access to SUD treatment?**

a Specifically related to IMD reimbursement and CIS

7 **Relating to COVID and how the public health emergency impacted your work:**

a How did COVID affect the roll out of the waiver?

b What was your biggest challenge during COVID; any main takeaways; any lingering effects?

8 **We would like to discuss the six individual milestones of the waiver and activities OHA is conducting to achieve them. I'll ask the same follow-up questions after describing each milestone and give you space to provide additional context or detail.** *[Bulleted items under each milestone activity are for interviewer reference and to provide additional context for key informants if necessary]*

Milestone 1 – Access to critical levels of care for OUD and other SUDs (this includes outpatient services, intensive outpatient services, coverage of MAT, coverage of medically supervised withdrawal management, parity of coverage in SUD service array). This includes activities such as [read activity listed after each letter]:

a Changes to reimbursement and standards for identification, initiation, and engagement of patients.

- Set scope of work for the workforce regarding prevention, early intervention, and crisis intervention services and establish reimbursement rate.
- Develop alternative payment methodologies for Day Treatment Services
- Set standards for identification, initiation, and engagement. Educate and engage providers around these standards and implementation.

b Requirements for and engagement with CCOs around their staffing levels and capacity to provide SUD services including MAT.

- Develop requirement for CCOs to have a mechanism to ensure that they have adequate capacity to serve those in their region around SUD services
- Engage with CCOs around adequate capacity levels for MAT and their service areas.
- Develop standard range of client to clinician ratio
- Develop provider review process around staffing levels

c Increase availability of culturally relevant training and diversity within the workforce.

- Develop more culturally relevant training for peer-delivered services workers, including a tribal- specific course and Latino- specific course

- Expand the number and diversity of culturally specific peers within the workforce

d Develop structure and reimbursement rates for agencies to provide case management for CIS.

- Pursue state plan amendment and OAR changes to expand the use of case management for pre- and post-treatment and for community-based services and supports such as housing and employment. Meet with agencies that provide case management for pre- and post-treatment and for community-based services (funded through state funds and federal grants) to develop a structure and draft regulations for this service. Develop reimbursement rates for agencies to provide this service (These are OHA activities directly related to parity of coverage in SUD service array)

i Have you encountered any successes or challenges related to this milestone?

ii Do you have anything to add/thoughts regarding this milestone?

iii How would you rate Oregon's likeliness to achieve this milestone on a scale of 1-5, with 1 being very unlikely and 5 being very likely?

Milestone 2 – Use of evidence-based, SUD-specific patient placement criteria. This includes activities such as *[read activity listed after each letter]:*

a New regulations around inclusion of ASAM criteria, licensing and certification, and staff training for new rules.

- Refine contract language with CCOs to include ASAM criteria
- Monitor CCOs to ensure prior authorization staff are adequately trained in ASAM criteria and SUD treatment services
- Revise state OARs 309-018 and 309-019 to specify services that must be provided for each ASAM level of care. State licensing/certification site reviews will include assessment of compliance with this requirement to ensure that service plans reflect appropriate interventions for the diagnosis and the ASAM level of care.
    - Consult with the Department of Justice
    - Consult with providers and other stakeholders
    - Develop and implement policy and OAR amendments
    - Provide training to providers regulated by the new rules (in person, onsite technical assistance and webinar)

i Have you encountered any successes or challenges related to this milestone?

ii Do you have anything to add/thoughts regarding this milestone?

iii How would you rate Oregon's likeliness to achieve this milestone on a scale of 1-5, with 1 being very unlikely and 5 being very likely?

Milestone 3 – Use of nationally-recognized SUD-specific program standards to set provider qualifications for residential treatment facilities. This includes activities such as *[read activity listed after each letter]:*

a New ASAM criteria regulations and licensing, including access to MAT.

- Revise state rules to specify services that must be provided for each ASAM level of care. (Repeated from Milestone 2)
- Revise OARs 309-008 and 415-012 to specify the process and standards for certification and licensure of each ASAM level of care in both outpatient and residential programs. OHA/Health Services Division-issued certificates and licenses will identify specific levels of care for each provider.
- Revise OAR to require that residential providers make MAT available onsite or provide coordination services to off-site MAT services including assisting with access, payment issues, transportation, and daycare.

i Have you encountered any successes or challenges related to this milestone?

ii Do you have anything to add/thoughts regarding this milestone?

iii How would you rate Oregon's likeliness to achieve this milestone on a scale of 1-5, with 1 being very unlikely and 5 being very likely?

Milestone 4 – Sufficient provider capacity at critical levels of care for MAT of OUD. This includes activities such as *[read activity listed after each letter]:*

a Assessing provider capacity in all levels of care and implementing changes to address gaps in provider ratios.

- Complete provider capacity study and use to identify areas of high need.
  - Create action plan to address deficits within the delivery system identify within the capacity study
  - Implement the plan to address the delivery system deficits
  - Assess current client to provider ratios for all levels of treatment
  - Develop the appropriate client to provider ratios
  - Develop a plan to address any gaps in provider ratio
  - Begin to implement changes addressing the gaps in provider ratios that were identified in service areas

b Ensuring access to MAT in various settings.

- Implement the capacity management and referral tracking database for all SUD residential services (ASAM levels 3-4) including MAT and withdrawal management
- Identify needs for MAT in OTP and OBOT settings
- Develop plan to meet needs of MAT in OTP and OBOT settings
- Implement plan to address needs of MAT in OTP and OBOT settings

c Identifying areas of high need.

- Assess the number of covered lives, availability of prevalence, incidents and diagnosis rates by region/ CCO

d Addressing the workforce shortage.

- Assess the needs of the Healthcare workforce identified in the assessment.
- Develop the plan to address workforce issues to include activities such as (focus groups, partnerships with providers and CCOs, etc.…)

i Have you encountered any successes or challenges related to this milestone?

ii Do you have anything to add/thoughts regarding this milestone?

iii How would you rate Oregon's likeliness to achieve this milestone on a scale of 1-5, with 1 being very unlikely and 5 being very likely?

Milestone 5 – Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD. This includes activities such as ***[read activity listed after each letter]***:

a Provider education and TA around identifying and treating SUD/OUD, and reducing Morphine Equivalent Doses.

- Provide greater behavioral health supports (TA, education, etc.) for opioid prescribers and health systems. Especially in primary care and emergency settings to both assist patients in reducing total Morphine equivalent doses and identify SUD/OUD cases which may need individualized care.

b Aligning payment structure with prescribing guidelines.

- Health Evidence Review Commission to align payment structure with prescribing guidelines.

c Distribution, training, and promotion of naloxone access

- Continue to distribute Naloxone in areas of high need.
- Continue cross-divisional collaboration at state and local level
- Increase communication between partners around the alignment of payment structure as it relates to Naloxone to increase access to and penetration of the population at greatest risk and need.
- Continue to encourage use and provide TA around Naloxone access, use and distribution to CCOs through the Transformation Center.

d Collaboration with organizations and providers for licensure and funding opportunities

- Continue to collaborate with provider licensing boards
- Educate and engage with provider organizations, CCOs, and healthcare prescribers to increase the number of registered individuals who utilize the system
- Leverage opportunities to secure more funding (federal grants, Federal opioid project funding, state funds etc.) to expand Opioid Rapid Response project statewide.

e Increase culturally-relevant capacity and workforce development for CIS specialists.

- Increase capacity of culturally-relevant peer-delivered services workforce
- Increase the number of culturally-relevant trainings (including tribal) to be developed and provided statewide

- Workforce development efforts around community integration/ housing support specialists as Medicaid participating providers

i Have you encountered any success or challenges related to this milestone?

ii Do you have anything to add/thoughts regarding this milestone

iii How would you rate Oregon's likeliness to achieve this milestone on a scale of 1-5, with 1 being very unlikely and 5 being very likely?

Milestone 6 – Improved care coordination and transitions between levels of care. This includes activities such as *[read activity listed after each letter]:*

a Increasing capacity for care coordination and health information exchange

- Provide support to CCOs through TA and training to increase capacity and quality of SUD care transitions
- CCO 2.0 includes language requiring CCOs use hospital event notifications and make them- and health information exchange for care coordinating accessible to primary care, behavioral health and dental organizations

i Have you encountered any successes or challenges related to this milestone?

ii Do you have anything to add/thoughts regarding this milestone?

iii How would you rate Oregon's likeliness to achieve this milestone on a scale of 1-5, with 1 being very unlikely and 5 being very likely?

9 Do you have any questions for us or any other thoughts that you would like to share?

Thank you very much for your time.

Measure Definitions

Critical SUD metrics for assessing milestone progress at the mid-point

All metrics courtesy of CMS Medicaid Section 1115 Substance Use Disorder Demonstrations: Technical Specifications for Monitoring Metrics Manual, Version 5.0, September 2022.

Milestone 1. Access to critical levels of care for OUD and other SUDs

Metric #7 Early Intervention

Description: Number of beneficiaries who used early intervention services (such as procedure codes associated with screening, brief intervention, and referral to treatment) during the measurement period.

Source: Medicaid claims

Metric #8 Outpatient Service

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

Source: Medicaid claims

Metric #9 Intensive Outpatient and Partial Hospitalization Services

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

Source: Medicaid claims

Metric #10 Residential and Inpatient Services

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

Source: Medicaid claims

Metric #11 Withdrawal Management

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

Source: Medicaid claims

Metric #12 MAT

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

Source: Medicaid claims

Metric #22 Continuity of Pharmacotherapy for OUD

Description: Percentage of adults age 18 and older with pharmacotherapy for OUD who have at least 180 days of continuous treatment.

Source: Medicaid claims

Milestone 2. Use of evidence-based, SUD-specific patient placement criteria

Metric #5 Medicaid Beneficiaries Treated in and IMD for SUD

Description: Number of beneficiaries with a claim for inpatient/residential treatment for SUD in an IMD during the measurement period.

Source: Medicaid claims

Metric #36 Average LOS in IMDs

Description: The average LOS for beneficiaries discharged from IMD inpatient/residential treatment for SUD.

Source: Medicaid Claims; State-specific IMD database

Milestone 3. Use of nationally recognized SUD-specific program standards to set provider qualifications for residential treatment facilities

n/a

There are no critical metrics identified for Milestone 3 (Use of nationally recognized, evidence-based SUD program standards to set residential treatment provider qualifications). CMS will assess progress on this milestone based on other data described in Sections III and IV.

Milestone 4. Sufficient provider capacity at each level of care

Metric #13 Provider Availability

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

Source: Provider enrollment database; Medicaid claims (if necessary)

Metric #14 Provider Availability – MAT

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

Source: Provider enrollment database; Medicaid claims (if necessary); Substance Abuse and Mental Health Services Administration Opioid Treatment Program Directory (if necessary); Substance Abuse

and Mental Health Services Administration Number of DATA-Waived Practitioners Newly Certified by Year (if necessary); Substance Abuse and Mental Health Services Administration Buprenorphine Treatment Practitioner Locator (if necessary)

Milestone 5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD

Metric #18 Use of Opioids at High Dosage in Persons Without Cancer

Description: Percentage of beneficiaries age 18 and older who received prescriptions for opioids with an average daily dosage greater than or equal to 90 morphine milligram equivalents over a period of 90 days or more. Beneficiaries with a cancer diagnosis, sickle cell disease diagnosis, or in hospice or palliative care are excluded.

Source: Medicaid claims

Metric #21 Concurrent Use of Opioids and Benzodiazepines

Description: Percentage of beneficiaries age 18 and older with concurrent use of prescription opioids and benzodiazepines. Beneficiaries with a cancer diagnosis, sickle cell disease diagnosis, or in hospice or palliative care are excluded.

Source: Medicaid claims

Metric #23 Emergency Department Utilization for SUD per 1,000 Medicaid Beneficiaries

Description: Total number of emergency department visits for SUD per 1,000 beneficiaries in the measurement period.

Source: Medicaid claims

Metric #27 Overdose death rate

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

Source: State data on cause of death

Milestone 6. Improved care coordination and transitions between levels of care

Metric #15 Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

Description: Percentage of beneficiaries age 18 and older with a new episode of AOD abuse or dependence who received the following:

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

The following diagnosis cohorts are reported for each rate: (1) Alcohol abuse or dependence, (2) Opioid abuse or dependence, (3) Other drug abuse or dependence, and (4) Total AOD abuse or dependence. A total of 8 separate rates are reported for this measure.

Source: Medicaid claims or EHR

Metric #17(1) Follow-up after Emergency Department Visit for Alcohol and Drug Dependence

Description: Percentage of emergency department visits for beneficiaries age 18 and older with a principal diagnosis of AOD abuse or dependence who had a follow-up visit for AOD abuse or dependence. Two rates are reported:

- Percentage of emergency department visits for which the beneficiary received follow-up within 30 days of the emergency department visit (31 total days).
- Percentage of emergency department visits for which the beneficiary received follow-up within 7 days of the emergency department visit (8 total days).

Source: Medicaid claims

Metric #17(2) Follow-up after Emergency Department Visit for Mental Illness

Description: Percentage of emergency department visits for beneficiaries age 18 and older with a principal diagnosis of mental illness or intentional self-harm and who had a follow-up visit for mental illness. Two rates are reported:

- Percentage of emergency department visits for mental illness for which the beneficiary received follow-up within 30 days of the emergency department visit (31 total days).
- Percentage of emergency department visits for mental illness for which the beneficiary received follow-up within 7 days of the emergency department visit (8 total days).

Source: Medicaid claims

Metric #25 Readmissions Among Beneficiaries with SUD

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

Source: Medicaid claims

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SUD WAIVER DEMONSTRATION RENEWAL BUDGET PROJECTION: COVERAGE COSTS FOR POPULATIONS

GROUP	MONTHS OF AGING	BASE YEAR DY 05	TREND RATE 2	DEMONSTRATION YEARS (DY) DY 06	DY 07	DY 08	DY 09	DY 10	TOTAL
SUD-IMD Pop Type:	**Medicaid**								
Eligible Member Months	12	14,441	4.4%	15,076	15,740	16,432	17,155	17,910	
PMPM Cost	12	$ 2,323.04	4.5%	$ 2,427.58	$ 2,536.82	$ 2,650.98	$ 2,770.27	$ 2,894.93	
Total Expenditure		$ 33,546,978		$ 36,599,131	$ 39,928,902	$ 43,561,685	$ 47,524,856	$ 51,848,629	$ 219,463,203
CIS Pop Type:	**Medicaid**								
Eligible Member Months	12	21,202	25.0%	26,503	33,128	41,410	51,763	64,704	
PMPM Cost	12	$ 229.90	4.5%	$ 240.25	$ 251.06	$ 262.36	$ 274.17	$ 286.51	
Total Expenditure		$ 4,874,356		$ 6,367,247	$ 8,317,175	$ 10,864,405	$ 14,191,826	$ 18,538,224	$ 58,278,876
CM Pop Type:	**Medicaid**								
Eligible Member Months	12	236	63.0%	384	626	1,020	1,663	2,711	
PMPM Cost	12	$ 96.02	4.5%	$ 100.34	$ 104.86	$ 109.58	$ 114.51	$ 119.66	
Total Expenditure		$ 22,621		$ 38,531	$ 65,634	$ 111,799	$ 190,431	$ 324,363	$ 730,757

ATTACHMENT C

Oregon Health Plan Substance Use Disorder 1115 Demonstration

EVALUATION PLAN

October 5, 2021

Table of Contents

A. General Background Information

1. Name and Duration of the Demonstration

Like the rest of the country, Oregon has struggled in recent years with a rise in substance use disorders (SUD), especially related to use of opioids. Data from the Substance Abuse and Mental Health Services Administration (SAMHSA) indicate that in 2018 & 2019, 9.5 percent of Oregonians ages 12 and older had a substance use disorder (SUD), and more than 600 people died of a drug related overdose in 2019. Approximately 7% of adults in Oregon reported needing but not receiving treatment for alcohol use disorder, compared to an average U.S. rate of 5.4%; 2.9% of adults in Oregon reported needing but not receiving treatment for illicit drug use disorders, compared to an average U.S. rate of 2.7%. Oregon recognizes that in order to combat this problem, better systems are needed that will improve access to SUD treatment, improve provider capacity, and implement effective standards of care. To this end, they submitted this waiver application, entitled "Oregon Health Plan Substance Use Disorder 1115 Demonstration" (Project Number 11-W-00362/10)." The project was approved on April 8, 2021, and will continue through March 31, 2026. This demonstration project is designed both to augment existing programs/initiatives and to implement new strategies to help Oregon meet these goals.

2. Demonstration Goals

The overall purpose of the waiver is to increase capacity to enhance Oregon's SUD treatment system and create a full continuum of care such that Medicaid beneficiaries have access to the appropriate levels of SUD treatment, including prevention, early intervention services, Medication Assisted Treatment (MAT), residential treatment, and a range of recovery support services. Under this integrated system, Medicaid beneficiaries will be able to access SUD services before their conditions progress to the point of needing prolonged, costly, and complex treatment. Specific goals are listed below.

1. Assist Oregon in increasing identification, initiation, and engagement of Medicaid beneficiaries diagnosed with SUD;
2. Assist the state in increasing beneficiary adherence to, and retention in, SUD treatment programs;
3. Assist Oregon in reducing inappropriate or preventable utilization of emergency departments and inpatient hospital settings through improved access to a continuum of care services; and
4. Provide a continuum of care to increase the chances of Medicaid beneficiaries of having a successful recovery process.

To achieve these goals, Oregon's implementation plan outlines the selected path to provide a full continuum of care for all Medicaid beneficiaries with Opioid Use Disorder (OUD) and other SUDs, regardless of age. This includes expanding access and improving outcomes in the most cost-effective manner possible.

Six key milestones will be used to guide implementation of Oregon's SUD demonstration:

1. Access to critical levels of care for OUD and other SUDs;
2. Use of evidence-based, SUD-specific patient placement criteria;

3. Use of nationally recognized SUD program standards to set provider qualifications for residential treatment facilities;
4. Sufficient provider capacity at critical levels of care, including for Medication Assisted Treatment of OUD;
5. Implementation of comprehensive treatment and prevention strategies to address opioid abuse and OUD;
6. Improved care coordination and transitions between levels of care.

3. Demonstration Activities and Implementation

The demonstration will explore whether providing a full continuum of care for SUD, including housing and employment support services, will reduce opioid-related overdoses and opioid-related deaths and improve health outcomes in Medicaid and CHIP recipients.

In this section we specifically describe in more detail two new strategies that this demonstration will implement:

1. Claim Federal reimbursement for treatment given in SUD Institutions for Mental Diseases (IMDs), SUD treatment programs with more than 16 beds.
2. Develop housing and employment support services for members with SUD that will provide transition assistance and build skills for maintaining housing.

We briefly describe each of these strategies below.

Federal Funding for SUD IMD Services

As of August 2021, Oregon had 71 SUD adult residential programs, of which 39 were licensed SUD IMDs (21 of them serving OHP members). Prior to the demonstration, federal rules precluded Federal Financial Participation (FFP) for SUD IMD stays, requiring the state to use general fund dollars to pay for stays for OHP members. The demonstration will allow Oregon to obtain FFP for SUD treatment services provided to all beneficiaries residing in SUD IMDs for the duration of treatment deemed clinically necessary. The state also aims to increase enrollment of SUD IMDs as OHP participating providers in order to improve provider networks across the state and meet the demand of this level of care. Implementation of the IMD exemption under this waiver will increase the Medicaid delivery system's capacity for residential SUD services and OHP members' access to SUD services. Oregon will monitor these changes over time, ensuring an adequate provider network.

Community Integration Services

Under this demonstration waiver, Oregon also intends to provide Community Integration Services (CIS) which consists of housing and employment supports to assist individuals with SUD who meet a risk factor identified in the CIS needs-based criteria. The state will provide individual housing and tenancy sustaining services, community transition services and pre-employment and employment support services to beneficiaries with an SUD diagnosis with an American Society of Addiction Medicine (ASAM) criteria (or equivalent assessment) level 1.0 or higher, indicating the need for outpatient SUD treatment. Individuals are also required to demonstrate specific risk factors to be eligible for services, which includes risk of homelessness, fleeing domestic violence, or being unable to be gainfully employed for at least 90 consecutive days in the past 12 months due to a mental or physical impairment. Services will be available to individuals engaged in SUD treatment and as home and community-based services (HCBS). These individualized services will support individuals' ability

to transition from higher levels of care such as hospital and residential settings to less costly in-home and community-based settings.

Housing supports include services necessary for individuals to obtain and reside in an independent community setting, particularly when transitioning from an SUD IMD to the community. Service categories under the demonstration are:

- Individual housing and pre-tenancy services (e.g., assessing housing situation, creating housing action plan)
- Individual housing and tenancy sustaining services (e.g., creating a housing stabilization plan with goals and approaches to meet goals; referrals to other services and supports as necessary)
- Community transition services (e.g., weekly or bi-weekly in-home sessions to identify, link and ensure receipt of services and resources necessary to support housing stability).

Employment support services are intended to assist individuals in obtaining and maintaining employment in the community. They include:

- Pre-employment services (e.g. workplace assessment, career coaching, job preparation training)
- Employment sustaining services (e.g., job coaching, benefits education and planning, financial and health literacy)

Under this demonstration waiver, CIS are a covered OHP benefit beginning January 1, 2022. Services are reimbursable through open card Fee-For-Service (FFS) as well as through Coordinated Care Organizations (CCOs). Reimbursement rates have been set by OHA in the fee-for-service rate fee schedule. CCOs are required to have a rate setting process and develop reimbursement rates with their network providers. SUD treatment programs providing CIS are required to follow specific criteria to determine eligibility, provide a minimum set of housing and employment services, and hire or contract with housing and employment support specialist(s) based on specified qualifications. Individuals delivering CIS are required to meet specific criteria such as having at least one year of relevant professional experience or training in the field of service.

4. Population Groups Impacted by the Demonstration

The demonstration will include all Oregon Medicaid recipients with a diagnosis of SUD aged 12 and older.

5. Other Relevant Contextual Factors

Over the past 10-15 years Oregon has instituted a number of programs that are aimed at or touch on reducing OUD and other SUD:

- Peer-Delivered Services (2007 – current): including outreach, system navigation, recovery and resiliency promotion, and community building for individuals with BH and their families.
- Block Grant (2014 -Current)- The Mental Health Block Grant and Substance Abuse Prevention and Treatment Grant provides funding for prevention, treatment and recovery support services for individuals who are uninsured or underinsured.

- SAMHSA Medication Assisted Treatment-Prescription Drug and Opioid Addiction program (2016 – 2019): increase treatment access by expanding OTP; expand office based opioid treatment options in rural areas; provide workforce training and consultation for addiction medicine workforce.
- SAMHSA Opioid State Targeted Response (STR) grant (2017 – 2020): programs to reduce prescription drug overdose and problematic prescribing of controlled substances; increase MAT prescribers with necessary waivers; increase number of OTP in rural areas; expand naxolone distribution; enhance recovery support services within the correctional system; partner with Oregon's Tribes on prevention, treatment, and recovery strategies.
- SAMHSA State Opioid Response grant (2018 – 2022: increase workforce capacity and access to MAT. Building on and expanding STR programs.
- Oregon House Bill 4143 directing the state to implement a pilot project through January 2021, placing peer recovery support mentors in emergency departments.

During the demonstration period, the state is planning to implement a number of other initiatives and programs as part of its larger effort to transform the behavioral health delivery system. For example, the implementation of Ballot Measure 110 is expected to begin concurrently with the SUD waiver and aims to expand availability of harm reduction, SUD treatment and recovery services as well as housing and employment support services and community-based services. Oregon also received approval under the State Plan Amendments to offer targeted case management and crisis intervention services for individuals with SUD, improving parity between mental health and SUD services. Other anticipated State Plan Amendments will cover life skills restoration, early intervention services, and prevention services. Oregon's SUD waiver application requested authority to expand access to Peer Delivered Services (PDS) to include services received outside an SUD treatment plan and to begin certifying Peer Run Organizations (PROs) as a new provider type. This authority was not included in the demonstration approval, although the state plans to continue to explore options for providing access to these services under OHP.

These recent and on-going activities may impact the demonstration project in various ways, including by creating challenges for providers and CCOs in implementing multiple new programs simultaneously, and difficulties identifying members with SUD who are interested in treatment and not already enrolled in other programs. As discussed in Section D below, they will also limit the Evaluator's ability to determine whether observed changes were due to the 1115 demonstration or to other policy changes.

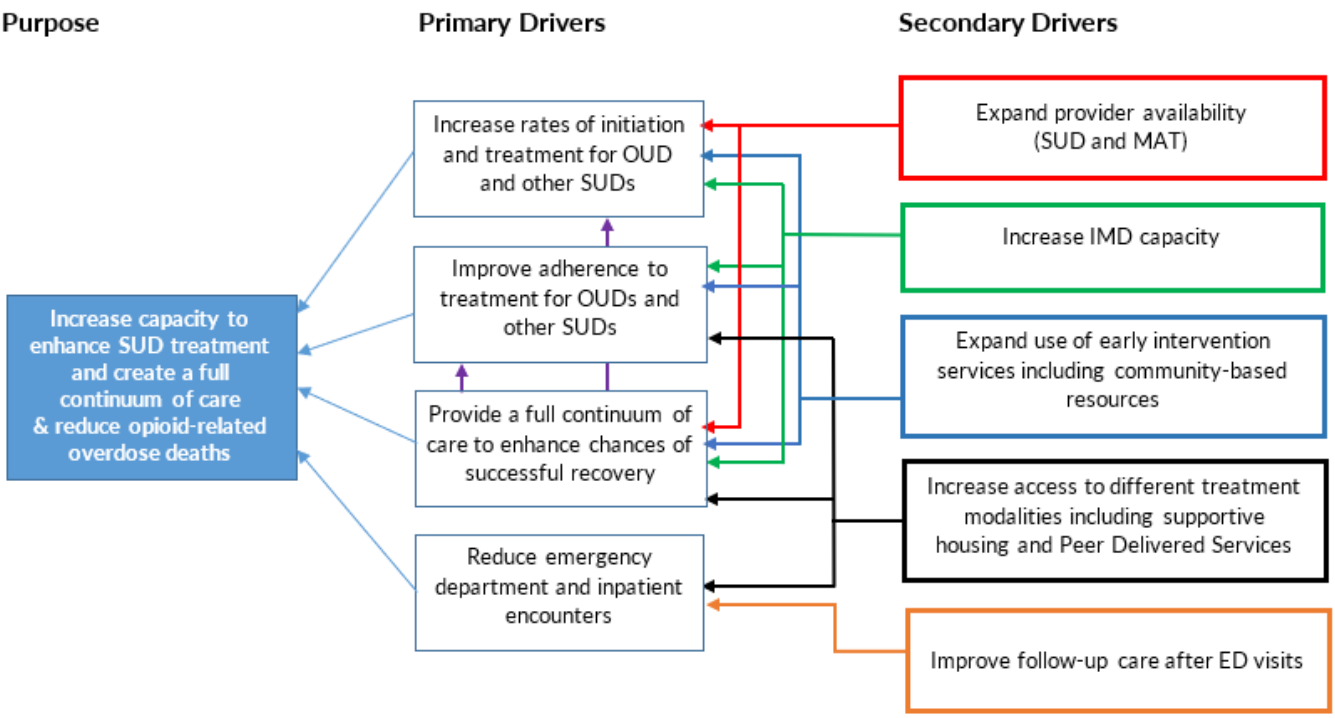
B. Evaluation Questions and Hypotheses

1. Driver Diagram

Figure 1 depicts the relationship between the amendment's overall purpose of reducing opioid related overdose deaths and the primary and secondary drivers that are necessary to achieve this overall goal. Four primary drivers contribute directly towards achieving the SUD amendment's purpose, with four secondary drivers that are necessary to support the primary drivers. As noted in the diagram, several of the primary drivers also affect other primary drivers. For example, providing a full continuum of care may increase rates of initiation and engagement in treatment as well as increasing longer term adherence to treatment.

Secondary drivers also contribute to multiple primary drivers. Expanding provider availability will contribute to providing the full continuum of care as well as increasing initiation of and engagement in treatment

Figure 1: Driver Diagram



2. Evaluation Hypotheses and Measures

Table 1: Evaluation Hypotheses and Measures

Demonstration Goal: Increase rates of identification, initiation, and engagement in treatment for OUD and other SUDs.						
Evaluation Hypothesis 1: The demonstration will increase the percentage of beneficiaries who are referred and engage in treatment for OUD and other SUDs.						
Outcome/ Driver	**Metric Description**	**Steward**	**Numerator**	**Denominator**	**Source**	**Analytic Approach**
Outcome	Initiation and engagement of alcohol and other drug dependence treatment	NQF #0004	Initiation: number of Medicaid beneficiaries who began initiation of treatment through an inpatient admission or outpatient visit within 14 days of the index episode start date	Number of Medicaid beneficiaries who were diagnosed with a new episode of alcohol or drug dependency during the first 10 and 1/2 months of the measurement year	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
			Engagement: initiation of treatment and two or more inpatient admissions or outpatient visits with any alcohol or drug diagnosis within 30 days after the date of the initiation encounter		Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Outcome	Medicaid beneficiaries with SUD diagnosis (monthly and annually)*	SUD Monitoring Protocol	Number of beneficiaries who receive MAT or a SUD-related treatment service with an associated SUD diagnosis during the measurement period	N/A	Claims data	Descriptive statistics; Analysis of trend data to examine provider availability post-implementation relative to pre-implementation baseline.
Outcome	Any SUD Treatment*	SUD Monitoring Protocol	Number of Medicaid beneficiaries who used any SUD treatment service, facility claim, or pharmacy claim during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Expand use of early	Early intervention*	SUD Monitoring Protocol	Number of Medicaid beneficiaries who received SBIRT during	Number of Medicaid beneficiaries in the	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing

intervention services			the measurement period	measurement period		person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Expand provider availability	SUD provider availability*	SUD Monitoring Protocol	The number of providers who billed Medicaid for an SUD service during the measurement period		Claims data; provider enrollment database	Descriptive statistics; Analysis of trend data to examine provider availability post-implementation relative to pre-implementation baseline.
	SUD provider availability - MAT*	SUD Monitoring Protocol	The number of providers who billed Medicaid for MAT during the measurement period		Claims data; provider enrollment database	Descriptive statistics; Analysis of trend data to examine provider availability post-implementation relative to pre-implementation baseline.
Secondary Driver: Increase SUD IMD capacity	Number of SUD IMDs providing treatment for SUD	OHA	The number of IMD facilities enrolled in OHP and providing SUD treatment during the measurement period		State provider enrollment SUD IMD data; claims data	Descriptive statistics; Analysis of trend data to examine the number of SUD IMD/IMD beds available post-implementation relative to pre-implementation baseline.
	Number of beds in SUD IMDs providing treatment for SUD	OHA	The number of beds in SUD IMD facilities enrolled in OHP and providing SUD treatment during the measurement period		State Provider Enrollment SUD IMD data	Descriptive statistics; Analysis of trend data to examine the number of SUD IMD/IMD beds available post-implementation relative to pre-implementation baseline.

Demonstration Goal: Improve adherence to and retention in treatment for OUD and other SUDs.						
Evaluation Hypothesis 2: The demonstration will increase the percentage of beneficiaries who adhere to treatment of OUD and SUDs.						
Outcome/ Driver	**Metric Description**	**Steward**	**Numerator**	**Denominator**	**Source**	**Analytic Approach**
Outcome	Continuation of pharma-cotherapy for OUD*	NQF #3175	Number of adult Medicaid beneficiaries with at least 180 days of continuous pharmacotherapy treatment for OUD	Adult Medicaid beneficiaries with OUD	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Primary Driver: Increase access to the full continuum of care	Outpatient services*	SUD Monitoring Protocol	Number of Medicaid beneficiaries who used outpatient services for SUD during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Intensive Outpatient and Partial Hospitalizati on Services*	SUD Monitoring Protocol	Number of beneficiaries who used intensive outpatient and/or partial hospitalization services for SUD (such as specialized outpatient SUD therapy or other clinical services) during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Residential and inpatient services*	SUD Monitoring Protocol	Number of Medicaid beneficiaries who used residential and/or inpatient services for SUD during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Withdrawal management *	SUD Monitoring Protocol	Number of Medicaid beneficiaries who used withdrawal management services during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to baseline.

	Medicaid beneficiaries treated in an SUD IMD for SUD*	SUD Monitoring Protocol	Number of Medicaid beneficiaries with a claim for residential treatment for SUD in an SUD IMD during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data, State Provider Enrollment SUD IMD data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Average Length of Stay in SUD IMDs*	SUD Monitoring Protocol	The average length of stay for beneficiaries discharged from SUD IMD residential treatment for SUD		Claims data, State Provider Enrollment SUD IMD data	Descriptive statistics; Analysis of trend data to examine the average length of stay post-implementation relative to pre-implementation baseline.
	Medication assisted treatment*	SUD Monitoring Protocol	Number of Medicaid beneficiaries who have a claim for MAT for SUD during the measurement period	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Access to preventive/ambulatory health services for adult Medicaid beneficiaries with SUD*	SUD Monitoring Protocol (Adjusted HEDIS)	Number of Medicaid beneficiaries with SUD who had an ambulatory or preventive care visit during the measurement period.	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Increase access to different treatment/ service modalities	Supportive housing services (access & utilization)	OHA	Number of beneficiaries receiving supportive housing services Number of supportive housing service encounters	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Analysis of trend data to examine CIS service use post-implementation.
	Supportive employment services (access & utilization)	OHA	Number of beneficiaries receiving supportive employment services Number of supportive employment service encounters	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Analysis of trend data to examine CIS service use post-implementation.

	Peer-Delivered Services (PDS)	OHA	Number receiving PDS	Number of beneficiaries with SUD in measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.

Demonstration Goal: Reduce utilization of emergency department and inpatient hospital settings where the utilization is preventable or medically inappropriate through improved access to other continuum of care services						
Evaluation Hypothesis 3: The demonstration will decrease the rate of emergency department and inpatient visits within the beneficiary population for SUD.						
Outcome/ Driver	**Metric Description**	**Steward**	**Numerator**	**Denominator**	**Source**	**Analytic Approach**
Outcome	Emergency department utilization for SUD per 1,000 Medicaid beneficiaries*	SUD Monitoring Protocol	Total number of emergency department visits for SUD in the measurement period	Per 1,000 Medicaid beneficiaries	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Inpatient admissions for SUD per 1,000 Medicaid beneficiaries*	SUD Monitoring Protocol	Total number of inpatient stays for SUD in the measurement period	Per 1,000 Medicaid beneficiaries	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Improved follow-up care after emergency department visits for mental health or alcohol and other drug dependence	Follow-up after emergency department visit for mental illness (7 days, 30 days)*	HEDIS/NCQA	Number of ED visits for mental illness for which the Medicaid beneficiary received follow-up within 7 days of the ED visit	Number of Medicaid beneficiary ED visits for mental illness	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
		HEDIS/NCQA	Number of ED visits for mental illness for which the Medicaid beneficiary received follow-up within 30 days of the ED visit	Number of Medicaid beneficiary ED visits for mental illness	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to baseline.

	Follow-up after emergency department visit for alcohol and other drug abuse or dependence (7 days, 30 days)*	HEDIS/NCQA	Number of ED visits for AOD for which the Medicaid beneficiary received follow-up within 7 days of the ED visit	Number of Medicaid beneficiary ED visits for AOD	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
		HEDIS/NCQA	Number of ED visits for AOD for which the Medicaid beneficiary received follow-up within 30 days of the ED visit	Number of Medicaid beneficiary ED visits for AOD	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Increase access to different treatment/ service modalities	Supportive housing services (access & utilization)	OHA	Number of beneficiaries receiving supportive housing services Number of supportive housing service encounters	Number of beneficiaries with SUD in measurement period	Claims data	Descriptive statistics; Analysis of trend data to examine CIS service use post-implementation.
	Supportive employ-ment services (access & utilization)	OHA	Number of beneficiaries receiving supportive employment services Number of supportive employment service encounters	Number of beneficiaries with SUD in measurement period	Claims data	Descriptive statistics; Analysis of trend data to examine CIS service use post-implementation.
	Peer-Delivered Services (PDS)	OHA	Number receiving PDS	Number of beneficiaries with SUD in measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.

Demonstration Goal: Provide a continuum of care to increase the chances of Medicaid beneficiaries having a successful recovery program.						
Evaluation Hypothesis 4: The demonstration will increase the percentage of beneficiaries with OUD or other SUDs who complete a successful recovery program.						
Outcome/ Driver	**Metric Description**	**Steward**	**Numerator**	**Denominator**	**Source**	**Analytic Approach**
Outcome	Continuation of pharma-cotherapy for OUD*	NQF #3175	Number of adult Medicaid beneficiaries with at least 180 days of continuous pharmacotherapy treatment for OUD	Adult Medicaid beneficiaries with OUD	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Outcome	Readmissions among beneficiaries with SUD*	SUD Monitoring Protocol	Number of all-cause readmissions during the measurement period among beneficiaries with SUD	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Expand use of early intervention services	Early intervention *	SUD Monitoring Protocol	Number of Medicaid beneficiaries who received early intervention services during the measurement period	Number of Medicaid beneficiaries in the measurement period	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Expand provider availability	SUD provider availability*	SUD Monitoring Protocol	The number of providers who billed Medicaid for an SUD service during the measurement period		Claims data	Descriptive statistics; Analysis of trend data to examine provider availability post-implementation relative to pre-implementation baseline.
Secondary Driver: Increase access to different treatment/	Supportive housing services (access & utilization)	OHA	Number of beneficiaries receiving supportive housing services Number of supportive housing service encounters	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Analysis of trend data to examine CIS service use post-implementation.

service modalities	Supportive employ-ment services (access & utilization)	OHA	Number of beneficiaries receiving supportive employment services Number of supportive employment service encounters	Number of Medicaid beneficiaries with SUD in the measurement period	Claims data	Descriptive statistics; Analysis of trend data to examine CIS service use post-implementation.
	Peer-Delivered Services (PDS)	OHA	Number receiving PDS	Number of beneficiaries with SUD in measurement period,	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
Secondary Driver: Increase SUD IMD capacity	Number of SUD IMDs providing treatment for SUD	OHA	The number of SUD IMD facilities enrolled in OHP and providing SUD treatment during the measurement period		State Provider Enrollment SUD IMD data; Claims data	Descriptive statistics; Analysis of trend data to examine the number of SUD IMD/IMD beds available post-implementation relative to pre-implementation baseline.
	Number of beds in SUD IMDs providing treatment for SUD	OHA	The number of beds in SUD IMD facilities enrolled in OHP and providing SUD treatment during the measurement period		State Provider Enrollment SUD IMD data	Descriptive statistics; Analysis of trend data to examine the number of SUD IMD/IMD beds available post-implementation relative to pre-implementation baseline.

Demonstration Goal: Reduce overdose deaths, particularly those due to opioids.						
Evaluation Hypothesis 5: The demonstration will decrease the rate of overdose deaths due to opioids.						
Outcome/ Driver	**Metric Description**	**Steward**	**Numerator**	**Denominator**	**Source**	**Analytic Approach**
Outcome	Use of opioids at high dosage in persons without cancer*	SUD Monitoring Protocol	Number of Medicaid beneficiaries with ≥90mg morphine equivalent dosage in the quarter	Number of Medicaid beneficiaries with a ≥60 days supply of opioids in the calendar quarter	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Concurrent use of opioids and benzodiazepines*	SUD Monitoring Protocol	Number of Medicaid beneficiaries with ≥60 days supply of opioids and prescribed ≥60 days supply of sedatives in the quarter	Number of Medicaid beneficiaries with a ≥60 days supply of opioids in the calendar quarter	Claims data	Descriptive statistics; Modified pre-post regression analysis comparing person-quarter outcomes post-implementation relative to pre-implementation baseline.
	Count of overdose deaths due to any opioid*	SUD Monitoring Protocol	Number of overdose deaths during the measurement period.		State death data	Descriptive statistics, including breakdown by county and type of drug.
	Rate of overdose deaths due to any opioid*	SUD Monitoring Protocol	Number of overdose deaths during the measurement period.	Number Oregon residents in the measurement period	State death data	Descriptive statistics, including breakdown by county and type of drug.

In addition to the above questions, this evaluation will also examine the impact of the SUD amendment on total expenditures and expenditures for SUD-related services. See Quantitative Methods section for more details.

* *Denotes metric reported in the SUD Monitoring Protocol*

C. Methodology

1. Evaluation Design Summary

The focus of the evaluation will be primarily quantitative, using data from multiple sources, as detailed below. However, the evaluation will also include qualitative interviews and focus groups, with the purpose of identifying the demonstration programs and interventions that were most effective in driving improvements.

2. Target and Comparison Populations

The primary focus of our evaluation is individuals aged 12 and older enrolled in Medicaid with a substance use disorder (SUD). We will also conduct subanalyses on the following subpopulation categories:

- Age groups (children <18; adults 18-64).
- Dual-eligible status (dually eligible for Medicare and Medicaid; not dually eligible).
- Pregnancy status (pregnant; not pregnant).
- Opioid use disorder (opioid use disorder diagnosis, other SUD diagnosis).
- Geography of residence (urban; rural; isolated).
- Race/ethnicity (if adequate data are available)
- Individuals enrolled 9 or 11 months during the preceding year;
- Individuals enrolled on employment and housing services

Analyses of these populations will provide an assessment of how utilization of specific treatment services has changed with expanded access to SUD IMD facilities and the initiative of new programs for supportive housing and other community-based services. The geographic analysis will specifically assess whether there was unequal implementation of the demonstration across regions in Oregon.

In addition to this primary analysis, we will also assess changes in the prevalence of SUD and opioid use disorder (OUD) in the broader population. These analyses will provide a more nuanced understanding of trends in the state. For example, if the prevalence of SUD was increasing during the study period, increased access to treatment might be observed in the broader population (with more people in the state receiving treatment), even if treatment rates among individuals with SUD did not increase. This finding would demonstrate, for example, that increased access might have allowed the state to keep pace with increasing SUD prevalence, but greater capacity or changes to the delivery system might be warranted to ensure that a greater proportion of individuals with SUD received recommended treatment.

Our analyses will also include comparison populations drawn from other states that have not implemented 1115 SUD waivers. We describe these comparison groups and our use of nationally available Medicaid claims data in greater detail below.

3. Evaluation Period

The demonstration period began on April 8th, 2021, and concludes on March 31, 2026. The final evaluation report is due 18 months later, on September 31, 2027. The year leading up to the demonstration period and the first year of the demonstration coincided with the COVID-19 Public

Health Emergency (PHE). We propose to use 2017-2019 data to serve as pre-policy and pre-COVID-19 baseline data. We denote the years 2020-2021 as "PHE period." This time period encompasses the onset of the COVID-19 pandemic, which significantly changed health care utilization across most services, as well as the initial implementation and ramp-up of the waiver demonstration, beginning in April 2021 and extending through December 2021. We will define the "post-policy" period as 2022-2025.

Our statistical analyses will primarily focus on changes between the "pre-policy" period of 2017-2019 and the "post-policy" period of 2022-2025. We will assess changes during the PHE years (2020 and 2021) by visually displaying changes in key outcomes and, when appropriate, by including results from the 2020/2021 period. We will use qualitative analyses to understand how patients and the health care system responded to the PHE (described in more detail below). Our choice of final models will be partly dependent obtaining a greater understanding of how the pandemic changed patterns of utilization.

Our analytic plan includes data through December 31, 2025. Assuming a 9 month lag in the receipt of Medicaid data form the state, we would anticipate receipt of the final data in September 2026, allowing us to conduct data management, analysis, and writing to include in the draft Summative Evaluation report to the state in July 2027. We note that some data sources, including data on the dual eligible population, extracted from the state's All Payer All Claims Database, may have a longer lag period. In this case, analyses of these populations may include an abbreviated post-period (e.g., data through June 30, 2025.)

4. Data Sources and Preparation

The quantitative portion of the evaluation will include member-level Medicaid data (claims, enrollment, and pharmacy data) from OHA's Health Systems Division (HSD), information on opioid overdose deaths from state death data, and data on SUD IMDs collected by OHA. To calculate outcomes for dual-eligible beneficiaries, the evaluation will also use Medicare claims data from Oregon's All Payer All Claims (APAC) database. Further, we will use claims data from the Medicaid Management Information System (MMIS) and Measures and Outcomes Tracking System (MOTS) for evaluation of the employment and housing initiatives. MMIS provides eligibility, claims status and prior authorization status. MOTS data is used by Oregon's behavioral health service providers to support improved care, controlled costs, and sharing information.

To create comparison groups, our analyses will also include Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF) dataset, a newly developed, national Medicaid claims data source that includes all states starting 2016, in addition to many states who began to submit data as early as 2014. The Evaluator has acquired 2014-2018 TAF data and is in the process of making these data available for research; they will obtain data through 2020 through other grant funding. Currently, TAF data comes with a 2-3 year lag, which implies that years up to 2023 could be used for the summative evaluation report.

The Evaluator has worked with Oregon Medicaid data for more than 10 years and has a well-established process in place for secure file transfer, data staging, and quality metric calculation. Similar processes will be established for data associated with this demonstration that are not already in the Evaluator's database.

The qualitative portion of the evaluation will require the collection of data from stakeholders through stakeholder engagement activities and key informant interviews. Methodology for the qualitative portion of the evaluation is described in Section 6 below.

5. Quantitative Methods

Our quantitative methods for our main analysis include 3 complementary approaches. Our first approach focuses on changes over time, using 2017-2019 as a pre-policy period, 2020-2021 as an interim period that accounts for the COVID-19 PHE, and 2022-2025 as a post-policy period. The focus of this analysis will be a pre-post approach. A second approach – an interrupted time-series model – will include time-trends and assess changes that deviate from those trends. These first two approaches will be conducted for all of our outcomes and include data from 2017 through 2025.

A third approach will include comparison states, using nationally available Medicaid claims data, described below. These analyses will focus on data from 2017 through 2023. Outcomes will be restricted to those that can be developed from claims. These comparison states will allow for a difference-in-differences model, comparing changes in Oregon to changes in states that do not implement an 1115 SUD waiver. The inclusion of other states will provide a more robust analysis of Oregon's demonstration. We will use these three approaches – pre-post, interrupted time series, and difference-in-differences – to assess the overall impacts of Oregon's 1115 SUD waiver. We will also consider using a distinct difference-in-differences approach that examines outcomes before and after eligibility for the analysis of the subpopulation of individuals receiving employment and housing services; we will describe this approach in detail further below.

Quantitative Analysis Plan

Prior to beginning the processes described above of creating the analytic database, the Evaluator will propose a detailed Quantitative Analysis plan, which will include specifics regarding:

- **Measure specifications:** Precise definitions for all measures to be used for the evaluation, as specified by the organization that defined the measure (e.g., NCQA HEDIS, AHRQ PQIs). Metrics will be updated annually using updated specifications from CMS.
- **Medicaid population and subgroup definitions:** Criteria that will be used to identify all populations and subgroups for whom measures will be reported (e.g., Medicaid eligibility codes, continuous enrollment criteria, and diagnosis or procedure codes that will be used to identify members with specific conditions).
- **Statistical models:** Statistical models that will be used to estimate change in outcomes associated with the demonstration, including functional form, control variables, and baseline periods. A general model is discussed below, and detailed models will be included in the quantitative analysis plan.
- **Steps to address other methodological challenges:** The Evaluation Design, Section D lists potential challenges with evaluating the waiver's effects, including Medicaid members who "churn" between Medicaid and other coverage (or no coverage), unequal penetration of waiver reforms in different geographic regions, and state or national policy changes occurring at the same time as the waiver. The quantitative analysis plan will describe how such challenges may affect results and any steps planned to address such challenges.

Outcome Metrics

Outcome metrics will be drawn primarily from the CMS-required SUD Monitoring Protocol reporting. The final list of metrics may change based on CMS approval of the Monitoring Protocol and may be modified if better performance measurement tools become available in the evaluation window.

Member-Level Outcomes
The Evaluator will calculate values for each proposed measure using data from the analytic database. Standard metrics from HEDIS or NCQA will be used whenever possible, and published definitions from the metric stewards will be used to create the metrics. Measures with binary outcomes—for example, whether or not the member received any services from any SUD IMD —will be calculated by determining who was eligible for the measure based on the published definition (the denominator) and then calculating whether eligible members met the criteria for the measure within a given timeframe (the numerator). Measures with non-binary outcomes—for example, the number of visits of a specific type— will be calculated by determining who was eligible for the measure (the denominator) and calculating a total for each eligible member (the numerator). A value is calculated for each individual for each calendar quarter, so that measures will be available at the person/quarter level. Results will be aggregated to calculate outcome measures for Medicaid members as a whole and for specific subgroups of Medicaid members. See Section E for a complete list of data elements.

System Capacity Outcomes
Three secondary drivers focus on system capacity outcomes: (1) expanding provider availability, (2) maintaining SUD IMD capacity, and (3) increasing access to different treatment/services modalities.

Each of these outcomes will be analyzed for evidence of trends over time throughout the demonstration period, at either the provider, clinic, or program level, depending on what is applicable for a particular research question and contingent on data availability. The analytic approach to each of these secondary drivers is slightly different from the Medicaid beneficiary-focused analyses described above, although it retains the mechanics of the pre-post analysis, comparing post-implementation outcomes relative to a pre-implementation baseline. However, the analysis will focus on state-wide and regional trends rather than person-quarter outcomes. We will report on the number of facilities that accept Medicaid and offer SUD treatment services, as well as the number of beneficiaries with SUD receiving supportive housing and employment services, throughout the demonstration period. Each secondary driver is examined below.

- **Expand Provider Availability.** There are two metrics associated with this secondary driver: SUD provider availability broadly and SUD provider availability specific to MAT. This analysis will focus on the providers who are actively providing SUD treatment services to Medicaid clients, identified using claim data. Descriptive statistics and an analysis of the number of providers post-implementation relative to pre-implementation baseline will demonstrate how provider availability has changed due to the implementation of the SUD demonstration.
- **Increase SUD IMD Capacity.** There are two metrics associated with this secondary driver: number of SUD IMDs enrolled in OHP and providing treatment for SUD and the number of beds in SUD IMDs enrolled in OHP and providing treatment for SUD. This information will be obtained from the state's SUD IMD licensing data, Provider Enrollment data and from provider specialty information in claims. Descriptive statistics and an analysis of trend data to examine the number of SUD IMDs and SUD IMD beds available post-implementation relative to pre-implementation baseline will demonstrate how the use of SUD IMDs have shifted due to the implementation of this demonstration. Depending on data availability, the number of SUD inpatient/residential treatment facilities and the number of beds in those facilities may provide a useful reference metric.
- **Increase Access to Different Treatment/Service Modalities.** The metrics associated with this secondary driver are supportive housing, supportive employment, and Peer Delivered

Services (PDS). Analyses of these programs will focus on access and utilization outcomes, including the number of beneficiaries receiving services, based on claims.

Statistical Models

As noted above, we will conduct three complementary analyses: a pre-post analysis, an interrupted time series analysis, and a difference-in-difference analysis. The pre-post approach is the least restrictive in the assumptions underlying the model, but it can be difficult to distinguish between secular trends and changes arising from the policy. The difference-in-difference model is a more robust approach. However, we will only be able to conduct these analyses through 2023, due to limitations in data availability. The interrupted time series analyses lies in between the pre-post and difference-in-difference analyses, accounting for some changes over time, but subject to bias when trends are not linear. Together, these three approaches will provide a robust assessment of the impacts of the policy.

The analytic and modeling approaches described below are appropriate for outcomes that measure member-level outcomes (e.g., ED use, SUD IMD use and length of stay). In most analyses we propose to assess changes in the 12 quarters of pre-period data (January 2017 through December 2019) and up to 16 quarters following the amendment approval (January 2022 through December 2025). Our unit of analysis will be the person-quarter. We use the following specification to look at the overall effects of the demonstration:

$$Y_{it} = \beta_0 + \sum_{t=1}^{8} \beta_t^{PHE} I_t + \sum_{t=1}^{16} \beta_t^{POST} I_t + \tau_Q + \theta X_{it} + e_{it} \ (1)$$

where Y_{it} is the outcome of interest for individual *i* in quarter *t*; I_t represents 1 of 16 year-quarters that occur in the demonstration implementation period (January 2022 through June 2025); τ_Q represents dummy variables for quarters (e.g., Q2, Q3, Q4, with Q1 as a reference); $\boldsymbol{X}_{it}$ is a vector of demographic covariates and risk adjusters; and e_{it} is a random error term associated with the unmeasured variation in the outcome of interest. In this model, the period January 2017 – December 2019 serves as a baseline. We estimate changes relative to this baseline, focusing on two sets of coefficients of interest. The coefficients β_1^{PHE}, β_8^{PHE} capture the change from baseline through the PHE, whereas the coefficientsβ_1^{POST}, β_{16}^{POST} capture changes occurring in each of the 16 quarters following the expansion of SUD IMD services, net of other observable factors.

Equation (1) is a "pre-post" study design. We will also test an alternative approach could be to impose linear trends using an "Interrupted Time Series" (ITS) analysis. The ITS model takes the following form:

$$Y_{it} = \beta_0 + \beta_1 T_t + \beta_2 Post_t + \beta_3 Post_t * T_t + \theta X_{it} + e_{it} \ (2)$$

Where T_t is a linear time trend, taking a value of 0 for the first quarter of 2017, 1 for the second quarter of 2017, 11 for the last quarter of 2019, 12 for the first quarter of 2022, and 27 for the last quarter of 2025 (the PHE periods are held out in this model.) The variable $Post_t$ takes a value of 1 beginning and following the first quarter of 2022, and 0 for time periods prior to the policy intervention. The ITS method can be helpful in estimating treatment effects in the presence of a stable, long-term trend. However, we anticipate that SUD measures may have been fluctuating prior to the 2021 policy change. In this case, results from the ITS method could be highly sensitive to the length of the pre-policy window. Thus, our primary assessment will not impose this restriction. We will test the sensitivity of our results through different assessments. First, we will test our results of the pre-post model against the ITS model. Second, we will assess all outcomes visually in order to

ensure that our primary findings are not driven by unusual fluctuations or outlier events. We will include results from the ITS analysis provided that its results are not sensitive to different modelling choices. Finally, we will compare these results to the difference-in-difference approach described below.

As a third alternative modeling approach, we use the TAF data to identify a suitable comparison groups of Medicaid beneficiaries enrolled in other states and to conduct a difference-in-differences analysis. Comparison states will include states that do not implement a SUD waiver during the study period. If possible, we will further select states that are geographically located in the western part of the United States and that have similar geographic and demographic characteristics as Oregon. Potential comparison states might include Colorado, Iowa, Alaska or Montana. We will compare pre-intervention outcome trends of potential comparison states to pre-intervention outcome trends for Oregon to guide our selection of comparison states.

The difference-in-difference approach is modeled according to the following equation:

$$Y_{it} = \beta_0 + \beta_1 Oregon_i + \beta_2 PHE_t + \beta_3 Post_t + \beta_4 Oregon_i * PHE_t + \beta_5 Oregon_i * Post_t + \theta X_{it} + e_{it} \quad (3)$$

In this equation, the variable $Oregon_i$ take a value of 1 if the beneficiary is in Oregon and 0 if the beneficiary is in another state. The variable PHE_t takes a value of 1 during 2020 and 2021, and 0 otherwise, while the variable $Post_t$ takes a value of 1 for all periods in 2022 and later, and zero otherwise. The coefficients of interest are β_4 – which captures relative differences between Oregon and comparative states during the PHE – and β_5, which captures relative differences between Oregon and comparative states in the post-policy, post-PHE period. Differences-in-differences models require parallel trends, i.e., hypothetical changes in outcomes of individuals in Oregon have to be identical to changes in outcomes of individuals in comparison states if Oregon had not implemented the waiver. While this assumption cannot be directly tested, we can assess whether there are parallel trends for the baseline period. We will consider trend adjustment if there is evidence of non-parallel trends.

The difference-in-difference approach can be used to distinguish between trends over time that are common to all states, and differential trends in Oregon due to implementation of the SUD-IMD waiver. Thus, this approach might be able to isolate the effects of the COVID-19 pandemic from waiver implementation effects. However, a limitation of this analysis is that it is restricted to outcomes that can be identified through TAF claims. Thus, outcome measures that use non-Medicaid claims such as receiving supportive housing services, SUD provider availability and IMD capacity are not included in this analysis (see Table 6 for details).

For all analyses, we will choose the regression model – e.g., linear regression, logistic regression, generalized linear model – that is most suitable for the distribution of the outcome variable *Y*. In general, we prefer linear models, which generally outperform other statistical models in estimating population averages for large N studies, and offer the additional advantages of generating coefficients that are straightforward to interpret. We note that the distribution of health expenditures is typically right skewed with a heavy mass at zero (see Cost Analyses section below for detailed description of planned cost analyses). The study team has experience in two-part models and

will test the relative performance of these approaches relative to an OLS approach. In our past work, we have found that, in large N studies, OLS has produced estimates that are similar to those produced by two-part models.

Key Covariates
At a minimum, we propose to adjust for age, gender, race/ethnicity (if data are of sufficient quality), tribal membership (yes/no), urban/rural/isolated residence, Chronic Illness and Disability Payment System (CDPS) risk indicators, SUD-induced mental health disorders, language spoken at home (English or other language), disability status (disabled/not disabled), participation in CIS programs (housing, employment, or both), and CCO in which the beneficiary is enrolled.

Subgroup Analyses
To assess whether pre-post changes differed among subgroups of Medicaid beneficiaries with SUD, we will run regression models separately for subgroups based on age, pregnancy status (pregnant/not pregnant), dual-eligible status, type of SUD (OUD/other), geography of residence (urban/rural/isolated), and race/ethnicity (if data are of sufficient quality).

Cost Analyses

A key component of the evaluation will focus on understanding how the change in FFP bends the cost curve and affects utilization trends for the population we expect to be impacted by the amendment – Medicaid beneficiaries with SUD. The intended methodologic approach and potential data issues are detailed below.

Methodological Approach
Given that the state's waiver will be implemented across the entire state at the same time, there is no geography-based comparison population available. However, for this cost analyses it is possible to use a comparison group design to examine a subset of costs, comparing expenditures for beneficiaries with SUD to those without SUD (a type of "difference-in-differences" analysis). This approach helps control for common confounding factors affecting changes in expenditures across all Medicaid beneficiaries, such as secular trends in service utilization or changes in reimbursement rates. (It also has some limitations: we cannot, for example, use this approach to measure changes in SUD-related costs, because, by definition individuals without SUD do not have SUD-related expenditures.)

To estimate changes in subsets of costs that exclude SUD services, we will use the following model:

$$Y_{iq} = \beta_0 + \beta_1 SUD_i + \beta_2\, PHE_q + \beta_3 Post_q + \beta_4 SUD_i \cdot PHE_q + \beta_5 SUD_i \cdot Post_q + \tau_Q + \theta X_{it} + e_{it} \quad (4)$$

where i denotes individual and q quarter. Y_{iq} is the spending measure under consideration, SUD_i is an indicator for Medicaid beneficiaries with SUD, PHE_q is an indicator equal to 1 for the years 2020 and 2021, $Post_q$ is an indicator for the post-implementation period, and the other elements are interpreted as above: τ_Q represents dummy variables for quarters; $\boldsymbol{X_{it}}$ is a vector of demographic covariates and risk adjusters; and e_{it} is a random error term associated with the unmeasured variation in the outcome of interest. The coefficient of interest is , the interaction between the post-period and SUD status. We will use the same covariates as those listed above, for non-spending measures. These estimates will include individuals with and without SUD.

Cost Measurement
Following CMS guidance, cost measures will explore spending at three levels of aggregation:

1. Total costs per member per month (PMPM)
2. Costs related to diagnosis and treatment of SUD
3. Sources of treatment cost drivers

Table 2 lists proposed cost measures, definitions, and data sources.

We will calculate all measures as spending on services per member per month (PMPM). For an individual member, spending PMPM will be calculated as total spending on services in a year divided by the number of months the member was enrolled in the year.

Our analyses of health expenditure data will include a number of additional adjustments. To address medical encounter claims where the "amount allowed" was listed as zero, we will impute spending by taking the annual mean value for non-zero payments across six categories of spending: inpatient, emergency department, outpatient, professional, pharmacy, and other. We will further calculate mean values separately for each Current Procedural Terminology (CPT) code or Diagnosis Related Group (DRG). We refer to these imputed claims as "repriced" claims.

Repriced spending measures allow for a feasible cost analysis, although it does create some limitations. These spending measures reflect changes in spending that would have occurred if all services were priced at the same level. These spending measures would also exclude spending by CCOs or the State through non-claims-based payment systems, including incentive payments from CCOs to health care providers for achieving quality goals, and spending on non-billable health-related services, such as individual or community-level flexible services.

Table 2: Cost Measures

Measure of Cost	Description	Data Source
ED Spending PMPM	Spending on Emergency Department Visits, defined as visits with CPT codes 99281-99285; UB revenue codes 0450, 0451, 0452, 0456, 0459, or 0981; or a 'place of service code' of 23 combined with a qualifying CPT code (from NCQA HEDIS definition)	Medical claims
Other Outpatient (non-ED) Visit Spending PMPM	Spending on outpatient visits that do not occur in the ED, including primary care visits and same-day discharges from an inpatient facility. Excludes behavioral health visits	Medical claims
Inpatient Spending PMPM	Spending on inpatient visits defined as visits with 'type of bill' beginning 11 or 12; 'place of service' codes 21 or 51; or 'claim type' of A (inpatient crossover) or I (inpatient). Includes inpatient facility and professional spending, and excludes behavioral health	Medical claims
Prescription Drug (Rx) Spending PMPM	Spending on prescription drugs using "allowed amount" from prescription drug claims	Prescription drug claims
Behavioral Health Spending PMPM	Spending on outpatient and inpatient behavioral health services	Medical claims
Total Spending PMPM	ED+Other Outpatient+Inpatient+Rx+Behavioral Health	Medical and prescription drug claims
SUD IMD Spending PMPM	Spending on SUD IMD services with an SUD diagnosis and/or procedure code	Medical claims; state SUD IMD data
SUD Non-SUD IMD Spending PMPM	Total spending with an SUD diagnosis and/or procedure code, excluding SUD IMD services.	Medical and prescription drug

		claims; state SUD IMD data
Non-SUD Spending PMPM	Total spending without an SUD diagnosis and/or procedure code	Medical and Rx claims

We will use the following steps to calculate spending on specific measures:

- **Primary Care, Emergency Department, and Other Outpatient Spending PMPM:** We use repriced medical claims to determine PMPM spending.
- **Inpatient Facility Spending PMPM:** We will calculate inpatient spending on the basis of DRG payments.
- **Inpatient Professional Spending PMPM:** We will use repriced medical claims to determine PMPM spending. We will exclude behavioral health claims, which are reported separately.
- **Prescription Drug Spending PMPM:** We will use pharmacy claims to determine PMPM spending. We will exclude drugs on a list of mental health prescription drugs provided by OHA, as these drugs were carved out of CCOs' global budgets and paid for on a fee-for-service basis. **We will base prescription drug spending on allowed amounts as they appear on pharmacy claims.** We will use "allowed amount" rather than "paid amount" because an evaluation of Oregon Medicaid pharmacy data suggested paid amounts for non-carveout drugs were vastly underreported.
- **Behavioral Health Spending PMPM:** We will identify behavioral health claims using definitions of behavioral health services from two prior studies of behavioral health care coverage and used repriced behavioral health claims to determine PMPM spending. Outpatient BH spending will be calculated from claims that include a BH code. SUD IMD spending will be calculated as the number of nights spent in the hospital multiplied by the a daily rate, to be determined in consultation with the Oregon Health Authority.
- **Total Spending PMPM:** Total spending will be calculated as the sum of all spending categories listed above.

To identify costs for services provided at SUD IMD facilities, we expect to use state licensing data on SUD IMDs and work with OHA to develop a methodology for identifying SUD IMD facilities in claims.

Federal Medical Assistance Percentage (FMAP) rates for managed care vary by Medicaid member according to certain eligibility characteristics (e.g., pregnancy). To calculate total federal costs, we will work with OHA to categorize members by Medicaid Eligibility Group (MEG) and use this classification to approximate the federal match rate at the member level.

We propose to exclude administrative costs associated with the demonstration from our measure of total spending. These data are not available in claims, and any analysis of administrative costs would require extensive consultation with the state and other stakeholders, which would be prohibitively time-consuming.

Analysis of employment and housing services

Our analysis of the CIS component of the waiver will follow the same approach described above, focusing on the subpopulation of individuals receiving employment or housing services. We anticipate that will not be able to use TAF data for this analysis because we likely will not be able to

identify a suitable comparison group (i.e., individuals residing in comparison states who would have received CIS services had they lived in Oregon). However, we will consider estimating an alternative difference-in-differences approach that compares outcomes before and after becoming eligible for CIS.

Specifically, the alternative difference-in-differences approach uses the following model:

$$Y_{i\tau} = \beta_0 + \beta_1 CIS_i + \beta_2\, Post_\tau + \beta_3 CIS_i \cdot Post_\tau + \theta X_{i\tau} + e_{i\tau} \quad (5)$$

where i denotes individual and τ quarter relative to CIS eligibility, $Y_{i\tau}$ are outcome measures, CIS_i is an indicator for Medicaid beneficiaries receiving CIS services (i.e., the treatment group), $Post_\tau$ is an indicator for the post-eligibility period, $X_{i\tau}$ are demographic characteristics and risk adjusters, and $e_{i\tau}$ is the random error term. The coefficient of interest is β_3, the interaction between the post-eligibility period and being a CIS recipient. This approach requires identification of a suitable comparison group, such as individuals matched to CIS recipients on demographic characteristics. Implementation of this approach also depends on claims information to identify the date of eligibility for CIS recipients. We will determine availability of such data and feasibility of this approach at the beginning of the evaluation period.

6. Qualitative Methods

Qualitative analysis will provide an early snapshot of successes and challenges to help inform the state's implementation of CIS and generate lessons learned from the demonstration. These findings will also help to provide context for quantitative results, including why the demonstration and its component projects did or did not achieve the expected effects. Two rounds of qualitative interviews are planned. The first will take place between November 2022 and May 2023 with findings presented in the Mid-Point Assessment and Interim Reports. The focus of the first round of interviews will be to assess early implementation successes and barriers and progress toward achievement of demonstration milestones. The second round of qualitative interviews will take place between July 2025 and January 2026 and will focus on overall successes, challenges, and potential changes needed. This information will be used in the Summative Report.

An important component of the qualitative work to account for the effects of the COVID-19 PHE. We anticipate that the PHE had multiple effects on the patient population, providers, and the overall implementation of efforts connect to this demonstration waiver. Qualitative data will provide context around changing patterns and trends in outcomes during the PHE period.

Interviews will be conducted with "key informant" representatives from the state, the CIS program, CCOs and/or provider organizations to understand implementation experiences from multiple organizational and professional perspectives. A sampling frame will be developed through consultation with OHA staff to ensure similarity or variation on interviewee characteristics of interest. Interviews will be conducted by a member of the research team, recorded, and transcribed. Transcripts will be analyzed using *a priori* coding analyzed in qualitative analysis software such as ATLAS.ti. The research team will review data, compare results within and across dimensions from the sampling frame, and develop key findings.

The Mid-Point Assessment will also include engagement with key stakeholders including SUD treatment providers, CCO representatives, and beneficiaries. The purpose of stakeholder engagement activities will be to solicit input on the design, planning and conduction of the Mid-Point Assessment, as well as the anticipated impact of the waiver on each of these groups. Activities may include

hosting a discussion group at an SUD provider conference and/or participation in meetings of CCO representatives hosted by OHA. OHA will provide assistance with identifying suitable venues, inviting participants, and coordinating logistics, as needed. These activities will occur between September and November 2022. Stakeholder input will be incorporated into the design of key informant interviews and inform the evaluation team's assessment of progress on meeting milestones in the state's SUD Implementation Plan.

Additionally, the evaluation team will perform qualitative analysis of program and policy documents collected systematically from state agencies, CCOs and other relevant stakeholders (spanning periods of program planning, design, and implementation) to identify themes related to program design, implementation and operations. Key constructs of interest at different phases and levels of analysis (e.g., state, organizational, and provider) will be iteratively identified through review of documents and discussion with OHA staff. Documents will be catalogued and reviewed for relevant text by the research team to develop a matrix of preliminary findings. This matrix will be further analyzed within and across categories to develop and refine key findings. For the Mid-Point Assessment, the evaluation team will review program and policy documents and consult with OHA staff to assess completion of actions outlined in the state's SUD Implementation Plan.

Qualitative analysis will address questions such as:

- What strategies appear to be successful in enrolling clients in SUD treatment? What are the barriers?
- How are SUD IMDs being used? Are they effective? What changes are needed?
- What organizational or contextual factors contribute to readiness of the state, CCOs and providers to implement the new SUD IMD and CIS programs?
- What do providers perceive as barriers to successful SUD treatment?
- What challenges arise related to designing and implementing the IMD/SUD and CIS programs? How do these challenges affect progress with IMD/SUD and CIS implementation?
- Is there variability in attributes of IMD/SUD and CIS program design, provider recruitment, client enrollment strategies, or other aspects of implementation across CCOs or geographic regions, and if so, what are the dimensions of this variation?
- What strategies do stakeholders employ to prevent or overcome challenges, and to what extent do these strategies appear to be effective?
- How has COVID-19 PHE changed the volume of services, composition of services, and ability to provide care to patients?
- What was the impact of COVID-19 PHE on financial stability of health care organizations?
- What other policy changes occurred in Oregon at the time of the demonstration? In what ways did these policies have overlapping, aligned, or conflicting effects?

Synthesis of the qualitative and quantitative analyses will support the effective translation of evaluation data and results, reinforcing quantitative findings in a non-technical format (e.g., through key-informant quotes in addition to measures) and helping to open the "black box" of program effects with supporting contextual information.

The appropriate design and execution of qualitative methods supporting the evaluation will ultimately depend on the State of Oregon's stage of implementation in late 2025 when the second round of key informant interviews will occur. Finalizing key elements of qualitative data collection and analysis will be the responsibility of the independent external evaluator. This responsibility will include: defining the number of key informant interviews; determining the universes and/or sample frames from which participants will be selected; determining when and how interviews will be conducted; aligning data collection instruments to specific research questions and hypotheses; and designing the specific data collection and analysis instruments.

7. Evaluation Reports

The Evaluator will deliver Mid-Point Assessment, Interim and Summative Evaluation Reports that are meaningful and accessible to the primary audiences for the evaluation. Given the six-month time lag for maturation of claims/encounters data and the time needed to analyze these data, we anticipate that the reports will cover quantitative results for the following time periods:

- The Mid-Point Assessment Report due to CMS in December 2023 will include results through June 2022.
- The Interim Report due to CMS in July 2025 will include results through December 2023
- The Summative Report due to CMS in September 2027 will present results through December 2025.

We anticipate that each report will contain a large volume of quantitative results, including descriptive statistics, data trends over time, change associated with the waiver as identified by regression analysis, and results for subgroups. The reports will use visual presentations to convey this information quickly and concisely and enable readers to explore the data. To provide context and help explain results, the reports will draw on information from Oregon's quarterly monitoring reports to CMS and other background documents as needed.

8. Support Tasks

The Evaluator will carry out the following tasks to support the quantitative and qualitative evaluations and deliver Interim and Summative Evaluation Reports:

- Facilitate kickoff meeting and regular meetings with state staff: The Evaluator will facilitate a kickoff meeting with the Oregon Health Authority to introduce the evaluation team and clarify scope as needed. In addition, the Evaluator will facilitate regular check-ins with the division to provide progress updates and address any challenges with the evaluation.
- Manage research compliance**:** The Evaluator will obtain necessary permissions to collect and use data needed for the evaluation. This includes obtaining IRB approval for the evaluation protocol and executing any data use agreements needed to obtain and use the data.
- Provide project management: The Evaluator will provide general project management to ensure deliverables are high-quality and delivered on time.

D.Methodological Limitations

This evaluation will have a number of limitations. First, the absence of a comparison group for a number of the outcomes limits the ability to absolutely determine whether the demonstration caused the observed changes in outcomes and to assess what the outcomes would have been in the absence of the demonstration. However, the analytic strategy described above is a strong method for evaluating drivers of change in the absence of a comparison group or for identifying changes specific to the population of interest (people with SUD in Oregon) in the presence of a comparison group.

Second, Medicaid members often "churn" between Medicaid and other coverage (or no coverage), which can make it difficult to follow individual over time and assess trends. To address this concern, we will conduct sensitivity analyses for the subpopulation of Medicaid beneficiaries enrolled 9 or 11 months during the preceding 12 months.

Third, unequal penetration of waiver reforms in different geographic regions could lead to limitations. Oregon is characterized by concentrated population centers in the western part of the state, with the rest of the state characterized by low or very low population density. This makes implementing reforms in a uniform way across the state very difficult. The realities of population scatter may require modifications of planned reforms in some areas. To address this concern, we will conduct subpopulation analysis by geographic location. Such analyses will shed light on whether the waiver was uniformly implemented across regions in Oregon, or whether specific regions benefitted more from the waiver than other regions.

Fourth, Oregon has implemented a number of other SUD-related programs over the past 5 years, which may confound efforts in the current demonstration. In addition, other state or national policy changes may occur at the same time as the waiver. This could limit the ability of the Evaluator to determine whether observed changes were due to the 1115 demonstration or to other policy changes. The evaluation will include an assessment of ways in which SUD-related policy changes and targeted interventions unrelated to the waiver may have affected outcomes. We will consider potential statistical techniques to account for such confounding factors. In general, however, distinguishing between these different policies would require strong and often implausible model assumption. We will leverage our qualitative analysis to shed light on the potential role of other initiatives in facilitating waiver implementation.

Fifth, as noted earlier, the year preceding the demonstration period and the first year of the demonstration overlap with the COVID-19 PHE. The PHE had profound effects on OHP members and the Medicaid behavioral health delivery system, for example, by exacerbating mental health conditions and substance use, limiting access to and capacity for in-person care, and creating financial hardship for many behavioral health providers. Oregon saw the closure of some residential SUD providers during the pandemic. We will leverage our qualitative analysis to better understand how CCOs and provider organizations adapted during the COVID-19 PHE. Our quantitative analyses are also aimed at differentiating between the PHE period and post-PHE period.

E. Additional Information/Attachments

1. Independent Evaluator Selection Process

The Center for Health Systems Effectiveness (CHSE) at Oregon Health & Science University has a long history of performing Medicaid 1115 waiver evaluations, including a completed evaluation of Oregon's implementation of Coordinated Care Organizations (2012 – 2017) and ongoing evaluations of Oregon's renewal of the CCO demonstration and Washington State's Medicaid Transformation Project (MTP), which includes a similar SUD element. CHSE has also worked successfully with OHA on a number of projects related to Value-Based Payments and other payment reform activities. The state selected CHSE as the independent evaluator based on their past experience with conducting waiver evaluations in Oregon and their experience with SUD evaluations in other states. CHSE has demonstrated a legacy of excellence and understanding in evaluating waivers, being fair and impartial in their evaluations. Having an an established relationship with OHA from working on other waivers enables CHSE to begin work on this waiver in a timely manner and meet the deliverables. The evaluator does not have any financial or other conflicts of interest.

2. Timeline

The following timeline presents anticipated start and end dates for evaluation activities described above, based on the schedule of deliverables in the waiver STCs.

Table 3: Evaluation Deliverables

Deliverable	Date Due to CMS
Draft Evaluation Plan	October 5, 2021
Mid-point Assessment	December 31, 2023
Draft Interim Evaluation Report	July 31, 2025
Draft Summative Report	September 30, 2027

Table 4: Evaluation Tasks

Task	Start Date	End Date
Support tasks		
Facilitate kickoff meeting with OHA	Jun 2022	Jul 2022
Prepare Quantitative Analysis Plan	Jul 2022	Oct 2022
Obtain IRB approval	May 2021	Aug 2022
Execute data use agreements	Jun 2022	Nov 2022
Facilitate monthly/bi-monthly check-ins	Jun 2022	Sep 2027
Build database and process quantitative data		
Obtain & process Jan 2017 – Jun 2022 claims data for Mid-Point Assessment	Apr 2023	Jun 2023

Task	Start Date	End Date
Calculate new quality measures and add to staging process	Apr 2023	Jul 2023
Obtain & process Jan-Jun 2022 claims data for Interim Report	Oct 2024	Dec 2024
Obtain & process claims through Dec 2025 for Summative Report	Oct 2026	Jan 2027
Quantitative Analysis for Mid-Point Assessment		
Code & calculate measures for MPA	Jan 2023	Jun 2023
Perform quantitative analysis including modeling	Jun 2023	Aug 2023
Qualitative work for Mid-Point Assessment		
Conduct stakeholder engagement	Sep 2022	Nov 2022
Prepare interview guide	Oct 2022	Dec 2022
Recruit informants, conduct interviews, and analyze data	Nov 2022	May 2023
Deliver Mid-Point Assessment		
Write draft report	Jun 2023	Oct 2023
Send draft for OHA review	Oct 31, 2023	
OHA reviews Draft #1 (assume 30 days)	Oct 31, 2023	Nov 30, 2023
Evaluator finalizes draft	Dec 1, 2023	Dec 22, 2023
Submit to CMS (**OFFICIAL DUE DATE**)	**Dec 31, 2023**	
Quantitative Analysis for Interim Evaluation Report		
Code & calculate measures for Interim Report	Jul 2024	Dec 2024
Perform quantitative analysis including modeling	Dec 2024	Mar 2025
Deliver Interim Report		
Write draft report	Jan 2025	May 2025
Deliver Draft #1 for OHA review	May 31, 2025	
OHA reviews Draft #1 (assume 30 days)	Jun 1, 2025	Jun 30, 2025
Evaluator finalizes Draft	Jul 1, 2025	Jul 25, 2025
Submit Draft for CMS review (**OFFICIAL DUE DATE**)	**Jul 31, 2025**	
CMS reviews Draft (assume 60 days)	Aug 1, 2025	Sep 30, 2025
Submit final report based on CMS comments	Nov 30, 2025	
Quantitative Analysis for Summative Evaluation Report		
Calculate measures for Summative Report	Nov 2026	Jan 2027
Carry out quantitative analysis for Summative Report	Feb 2027	May 2027
Qualitative work for Summative report		
Prepare interview guide	Apr 2025	Jun 2025
Recruit informants, conduct interviews, and analyze data	Jul 2025	Jan 2026
Deliver Summative Evaluation Report		
Write draft report	Mar 2027	Jun 2027
Deliver Draft #1 for OHA review	Jul 31, 2027	

Task	Start Date	End Date
OHA reviews Draft #1 (assume 30 days)	Aug 1, 2027	Aug 30, 2027
Evaluator finalizes draft	Sep 1, 2027	Sep 25, 2027
Submit Draft for CMS review **(OFFICIAL DUE DATE)**	**Sept 30, 2027**	
CMS reviews Draft (assume 60 days)	Oct 1, 2027	Nov 30, 2027
Submit final report based on CMS comments	Jan 30, 2028	

3. Evaluation Budget

Table 5 below presents the total demonstration budget for tasks in this work plan.

Table 5: Evaluation Budget

Deliverable	Cost
Mid-Point Assessment	$371,881
Interim Report	$537,204
Summative Report	$935,401
Total	**$1,884,486**

Staff type	Hours	Rate	Cost
Principal Investigator	661.2	$275	$181,841
Project Manager/Co-Investigator	2517.0	$250	$629,245
Statistical Analyst	2581.1	$225	$580,740
Qualitative Analyst	1607.8	$225	$240,252
Research Assistant	431.5	$175	$75,508
TAF data			$136,900
Total			**$1,884,486**

The budget covers:

1. All quantitative data-related tasks including:
    a. Processing data from Medicaid claims, APAC, and other sources listed in the Data Elements table below.
    b. Calculating standard and custom quality metrics and other needed quantitative data fields (e.g., chronic disease score).
    c. Creating subgroups for analysis.
    d. Statistical analysis: descriptive and modeling for entire population and subgroups.
    e. Interpreting results.
    f. Creating tables and visuals to communicate the results.
    g. Purchasing TAF data for 2021-2023. The Evaluator will provide 2017-2020 TAF data, purchased through other funding sources.
2. Qualitative/policy analysis tasks including:
    a. Creating interview guides and scripts.
    b. Developing sampling frames.

    c. Performing interviews and stakeholder engagement.
    d. Coding and analyzing results.
    e. Analyzing policy and program documents.
    f. Interpreting qualitative and quantitative results.
3. Report preparation
    a. Developing and refining report outlines.
    b. Integrating all demonstration results.
    c. Writing the Mid-Point Assessment, Interim, and Summative reports.
    d. Editorial review, assembly, layout, and copyediting of reports.
4. Project management
    a. Convening regular meetings with OHA team.
    b. Convening regular internal team meetings.
    c. Tracking evaluation timeline and tasks.
    d. Managing compliance activities (IRB/DUA).

4. Data Elements

Table 6: Data Elements Required for the Evaluation

Hypothesis	Data Element	Notes	Data Source	Included in TAF?
1	Initiation of treatment for SUD	Use HEDIS definition	Claims	Yes
1	Engagement in treatment for SUD	Use HEDIS definition	Claims	Yes
1	SUD diagnosis	Use Monitoring Protocol specifications	Claims	Yes
1	Any SUD treatment	Use Monitoring Protocol specifications	Claims	Yes
1, 4	Early intervention	Use Monitoring Protocol specifications	Claims	Yes
1, 4	SUD provider availability	Number of behavioral health providers enrolled in Medicaid that billed for SUD services	Claims; provider enrollment database	Maybe[(a)]
1	SUD provider availability – MAT	Number of providers enrolled in Medicaid that billed for MOUD services during the measurement period	Claims; provider enrollment database	Maybe[(a)]
1, 4	Number of SUD IMDs providing treatment for SUD		Claims; State Provider Enrollment SUD IMD data	No
1, 4	Number of beds in SUD IMDs providing treatment for SUD		State Provider Enrollment SUD IMD Data	No
2, 4	Continuation of pharmacotherapy for OUD	NQF # 3175	Claims	Yes
2	Outpatient services	Use Monitoring Protocol specifications	Claims	Yes
2	Residential and inpatient services	Use Monitoring Protocol specifications	Claims	Maybe[(b)]
2	Withdrawal management	Use Monitoring Protocol specifications	Claims	Yes
2	Medicaid beneficiaries treated in an SUD IMD for SUD	Use Monitoring Protocol specifications	Claims, State Provider Enrollment SUD IMD data	No
2	Average length of stay in SUD IMDs	Use Monitoring Protocol specifications	Claims, State Provider Enrollment SUD IMD data	No
2	Medication assisted treatment	Use Monitoring Protocol specifications	Claims	Yes

2	Access to preventive/ambulatory services for beneficiaries with SUD	Use Monitoring Protocol specifications	Claims	Yes
2, 3, 4	Beneficiaries with SUD receiving supportive housing services	Identify services using billing codes to be opened in January 2022	Claims, CIS Billing Guidance	No
2, 3, 4	Beneficiaries with SUD receiving supportive employment services	Will need OHA guidance for identifying services in claims	Claims, CIS Billing Guidance	No
2, 3, 4	Beneficiaries with SUD receiving PDS	Will need OHA guidance for identifying services in claims	Claims, PDS Billing Guidance	No
3	ED utilization for SUD	Use Monitoring Protocol specifications	Claims	Yes
3	Inpatient admissions for SUD	Use Monitoring Protocol specifications	Claims	Yes
3	Follow-up after ED visits for MH	HEDIS/NCQA	Claims	Yes
3	Follow-up after ED visits for AOD	HEDIS/NCQA	Claims	Yes
4	Readmissions (all-cause)	Use Monitoring Protocol specifications	Claims	Yes
5	Use of opioids at high dosage in persons without cancer	Use Monitoring Protocol specifications	Claims	Yes
5	Concurrent use of opioids and benzodiazepines	Use Monitoring Protocol specifications	Claims	Yes
5	Overdose deaths due to any opioid	Use Monitoring Protocol specifications	State death data	No
Cost	ED spending	See Table 2	Claims	Yes
Cost	Other outpatient (non-ED) spending	See Table 2	Claims	Yes
Cost	Inpatient spending	See Table 2	Claims	Yes
Cost	Prescription drug spending	See Table 2	Claims	Yes
Cost	Behavioral health spending	See Table 2	Claims	Yes
Cost	Total spending	See Table 2	Claims	Yes
Cost	SUD IMD spending	Use Monitoring Protocol specifications	Claims, State Provider Enrollment SUD IMD data	No
Cost	SUD Non-SUD IMD spending	Use Monitoring Protocol specifications	Claims, State Provider	No

			Enrollment SUD IMD data	
Cost	Non-SUD spending	Use Monitoring Protocol specifications	Claims	No

Notes: (a) Provider information might be available in TAF data.

(b) Residential TAF files might be incomplete.

ATTACHMENT D

Oregon Health Plan 2021-2026 Substance Use Disorder 1115 Demonstration

INTERIM REPORT DRAFT

December 2024

CENTER FOR HEALTH SYSTEMS EFFECTIVENESS

Prepared for:

Oregon Health Authority

OHSU

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The Center for Health Systems Effectiveness at Oregon Health & Science University is a research organization that uses economic approaches and big data to answer pressing questions about health care delivery. Our mission is to provide the analyses, evidence, and economic expertise to build a more sustainable health care system.

CHSE's publications do not necessarily reflect the opinions of its clients and funders.

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Icons used courtesy of the Noun Project. Please see references page.

EXECUTIVE SUMMARY

In April 2021, Oregon became one of 37 states to implement a Medicaid 1115 substance use disorder (SUD) waiver to build out its continuum of care for addiction and to receive federal funding for services in Institutions for Mental Disease (IMDs), defined as residential SUD and mental health treatment facilities with more than 16 beds.

About the interim report

The Oregon Health Authority contracted with the OHSU Center for Health Systems Effectiveness (CHSE) to complete the federally mandated waiver evaluation. In this interim report, we used Medicaid and All-Payer All-Claims data to assess changes in 36 claims-based SUD performance measures between 2017-2019 (immediately before the waiver) and 2022 (one year into the waiver). We also reported changes in nine non-claims measures during the early waiver implementation period. Findings were organized by five evaluation waiver hypotheses related to waiver goals (see Exhibit A, next page).

The research design did not allow controlling for potential impacts of the COVID 19 public health emergency (PHE), which overlapped with the evaluation period. For this reason, we brought in findings from the 2024 Mid-Point Assessment (MPA). The MPA calculated changes for similar SUD performance metrics between 2021 and 2022 as pandemic-related disruptions began subsiding, helping us differentiate between longer-term and more recent performance trends.

Key findings

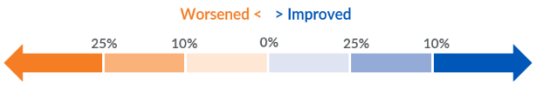
- **The state improved its continuum of care in some areas, while losing ground in others.** The number of Medicaid members with OUD accessing supportive housing, supportive employment, and peer-delivered services increased, although levels of supportive housing and employment were modest by 2023. Early intervention, withdrawal management, and access to preventive ambulatory health services declined. However, MPA findings suggest that early intervention and withdrawal management improved between 2021 and 2022, signaling a possible rebound after the initial phase of the COVID-19 pandemic.

- **Care coordination measures declined.** Rates of follow-up after emergency department (ED) visits for mental illness and for alcohol and other drug abuse or dependence declined or stayed flat from pre-waiver through 2022. These measures also did not improve after 2021, suggesting that care coordination deteriorated even as the pandemic receded.

- **Access to residential treatment got worse.** Oregon obtained an SUD waiver to increase access to residential treatment. However, the rates of treatment in IMDs, the number of SUD IMDs, and the number of SUD beds in IMDs all declined, suggesting the opposite outcome.

Exhibit A. Most claims-based measures did not move in the desired direction, and changes for non-claims measures were mixed

Hypothesis	Claims Based Metrics Outcomes	Non-Claims Based Metrics Outcomes
1. The demonstration will increase the percentage of beneficiaries who are referred and engage in treatment for OUD and other SUDs.		
2. The demonstration will increase the percentage of beneficiaries who adhere to treatment of OUD and SUDs.		
3. The demonstration will decrease the rate of emergency department and inpatient visits within the beneficiary population for SUD.		
4. The demonstration will increase the percentage of beneficiaries with OUD or other SUDs who complete a successful recovery program.		
5. The demonstration will decrease the rate of overdose deaths due to opioids.		



- **The use of medication for treatment was mixed.** While the rate of Medicaid members using medication to treat OUD and other SUDs increased, the rate that continued with OUD pharmacotherapy declined. Moreover, findings from the MPA suggested that medication treatment remained flat between 2021 and 2022.

- **Emergency department visits and hospitalizations declined.** ED utilization for SUD, inpatient stays for SUD, and readmissions to hospitals all declined. This was an encouraging finding consistent with the waiver goal of reducing preventable or medically inappropriate high-intensity care.

- **Spending for SUD services declined.** Overall Medicaid spending declined moderately to strongly from pre-waiver to 2022, from $638.30 per member per month (PMPM) to $519.46 PMPM. So did spending in all sub-categories, which included ED spending, other outpatient spending, inpatient spending, prescription drug spending, behavioral health spending, SUD IMD spending, non-SUD IMD spending, and non-SUD spending.

- **Only a few outcomes varied for sub-populations.** Receipt of any SUD treatment declined among the full population, but improved among Medicaid members 65 years and older, dually eligible Medicaid members, and Medicaid members with an OUD diagnosis. Use of Medication-assisted treatment increased for the full population but declined among Medicaid members categorized as Black. Prescription drug spending, which declined moderately for the full population, increased among Medicaid members 65 years and older, dual eligible Medicaid members, and Medicaid members categorized as "other" for race.

Recommendations

Based on findings, we offer the following recommendations:

- **Investigate and address shortcomings in follow-up after ED visits.** Follow-up after ED visits is an important part of the continuum of care. Declines in follow-up after ED visits for mental illness persisted in the interim report and the MPA, suggesting an ongoing trend. Improvement strategies could include identifying ED providers with low follow-up rates and working with their organizations or provider networks on care coordination. Additionally, OHA should assess how many Medicaid members with SUD have case managers who can help them navigate the health care system. Case management services were expanded to all individuals with SUD as part of the waiver, but not all Medicaid members with SUD may be aware of this benefit. OHA could also work with CCOs and providers employing case managers to establish accountability for follow-up care and, if suitable, create financial incentives for them.

- **Assess reasons for declines in the rate of treatment in IMDs, the number of SUD IMDs, and the number of SUD beds in IMDs.** Increasing access to residential treatment was an important goal of Oregon's SUD waiver and declines in IMD-related measures suggested that the state has moved in the wrong direction. A first step could be to reach out to IMDs to better understand the observed declines. OHA should also continue working with Governor Kotek and reach out to state legislators to increase funding for residential bed capacity. Governor Kotek's 2025-2027 budget proposes $90 million to increase treatment beds, but the budget must compete with transportation, education, housing and other social service priorities.

- **Continue increasing OUD medication treatment and improve continuity of OUD pharmacotherapy.** Strategies could include: encouraging primary care providers to prescribe more buprenorphine; encouraging opioid treatment programs (OTPs) to provide take-home methadone to stable patients; reviewing coordinated care organizations' (CCOs') contracts to ensure that increasing the rate of OUD medication treatment and keeping patients on OUD pharmacotherapy are incentivized; and assessing factors that may contribute to disruptions in OUD medication treatment.

- **Monitor and address the fentanyl crisis. We observed an increase in opioid-related deaths.** This is consistent with the most recent CDC statistics showing an overall decline in deaths nationally yet an increase in Oregon. This development is alarming, and fentanyl is likely a major contributing factor. OHA should closely monitor fentanyl-related deaths and continue naloxone distribution efforts to reverse overdoses.

- **Increase enrollment in supportive housing and employment.** While enrollment for both services increased, levels were low as of 2023, especially for supportive housing. OHA could review the capacity for more services and intensify outreach to increase awareness and enrollment accordingly.

- **Monitor outcomes that did not improve in this interim report, but did improve in the MPA.** A number of measures followed this pattern: early intervention, initiation and engagement of

treatment for alcohol abuse or dependence, initiation and engagement of treatment for total AOD abuse or dependence, intensive outpatient and partial hospitalization services, residential and inpatient services, withdrawal management, SUD treatment in an IMD., Improvements after 2021 suggested a reversal of trends. However, these measures still did not move in the desired direction from the pre-COVID period to 2022. Continued monitoring of these measures will further clarify whether promising trends for the period 2021-2022 will continue throughout the waiver period, or whether some of these outcomes require further attention.

Acronyms

AOD	Alcohol and Other Drug
APAC	All Payers All Claims
ASAM	American Society of Addiction Medicine
CCO	Coordinated Care Organizations
CDC	Centers for Disease Control and Prevention
CHSE	Center for Health Systems Effectiveness
CMS	Centers for Medicare and Medicaid Services
ED	Emergency Department
FDA	Food and Drug Administration
FFP	Federal Financial Participation
IMD	Institutions of Mental Disease
MAT	Medicated Assisted Treatment
MAT-PDOA	Medicated Assisted Treatment-Prescription Drug and Opioid Addiction
MAT SUD	Medicated Assisted Treatment Substance Use Disorder
MPA	Mid-Point Assessment
NPI	National Provider Identifiers
OHA	Oregon Health Authority
OTP	Opioid Treatment Programs
OUD	Opioid Use Disorder
PDS	Peer Delivery Services
PMPM	Per Member Per Month
PRO	Peer Run Organizations
RFA	Request for Applications
SOR	State Opioid Response
STR	State Targeted Response
SUD	Substance Use Disorder

Table of Contents

Introduction

On April 8, 2021, Oregon's application for a Section 1115 Substance Use Disorder (SUD) waiver became effective. Oregon applied for the waiver to receive additional federal funding and to create a full continuum of care that includes prevention, crisis intervention, recovery support and community integration.

As part of the waiver, the Centers for Medicare and Medicaid Services (CMS) required Oregon to conduct an independent evaluation of the demonstration. Evaluation components include a Mid-Point Assessment, completed in May 2024; an interim assessment (this document); and a summative assessment, to be completed in 2027.

This interim report presents assessment findings of early waiver implementation efforts through the end of 2022. Our analysis is primarily quantitative, using Medicaid claims and other administrative records. The report is oriented around the following five evaluation hypotheses, and, in addition, an assessment of spending changes:

- **Hypothesis 1.** The demonstration will increase the percentage of beneficiaries who are referred and engage in treatment for OUD and other SUDs.
- **Hypothesis 2.** The demonstration will increase the percentage of beneficiaries who adhere to treatment of OUD and SUDs.
- **Hypothesis 3.** The demonstration will decrease the rate of emergency department and inpatient visits within the beneficiary population for SUD.
- **Hypothesis 4.** The demonstration will increase the percentage of beneficiaries with OUD or other SUDs who complete a successful recovery program.
- **Hypothesis 5.** The demonstration will decrease the rate of overdose deaths due to opioids.
- **Spending.** The report also includes a quantitative assessment of changes in Medicaid expenditures as they relate to the waiver.

The main parts of the report are:

- **Background.** We describe the 1115 SUD waiver, Oregon's SUD program prior to its waiver, waiver goals and implementation activities, and other SUD-related changes that occurred during the waiver period. This section also contains a summary of qualitative findings from the Mid-Point Assessment.
- **Evaluation Questions and Hypothesis.** This section includes a description of the five evaluation questions and hypotheses as well as the spending analysis.
- **Methodology and Methodological Limitations.** These two sections describe data sources, measures, the statistical approach, and limitations.

- **Results.** We present and describe findings of the quantitative analysis for each of the five evaluation hypotheses and the spending assessment.

- **Conclusions, Interpretations, Policy Implications and Interactions with Other State Initiatives and Lessons Learned and Recommendations.** In these three sections we summarize and interpret results, and offer recommendations based on our findings.

Background

People with substance use disorder (SUD) require treatment along a continuum of care, ranging from promotion and prevention to active treatment and recovery. Active treatment may occur in low-intensive outpatient settings, residential treatment facilities, or high-intensity inpatient settings. Since the inception of the Medicaid program in 1965, states were prohibited from receiving federal funds for services provided to patients ages 21-64 in Institutions of Mental Disease (IMDs), defined as residential substance use disorder and mental health treatment facilities with more than 16 beds. This so-called IMD exclusion reflected states' historic responsibility to finance psychiatric institutions but has been seen as an impediment to states' providing sufficient access to the full continuum of SUD care.

In 2015, the Centers for Medicaid & Medicare Services (CMS) announced a new section 1115 waiver demonstration opportunity to improve SUD care.[1] States with such SUD waivers can request federal financial participation (FFP) authority for expenditures in IMDs affected by the IMD exclusion. They further agree to demonstrate progress in the following six milestones:[2]

- **Milestone 1.** Increase access to critical levels of care for opioid use disorder (OUD) and other SUDs;
- **Milestone 2.** Achieve widespread use of evidence-based, SUD-specific patient placement criteria;
- **Milestone 3.** Use nationally recognized, evidence-based SUD program standards to set residential treatment provider qualifications;
- **Milestone 4.** Achieve sufficient provider capacity at each level of care, including providers authorized to prescribe medications for opioid use disorder;
- **Milestone 5.** Implement comprehensive treatment and prevention strategies to address opioid abuse and OUD; and
- **Milestone 6.** Improve care coordination and transitions between levels of care.

As of September 2024, 36 states and the District of Columbia had an approved SUD waiver.[3] Oregon's SUD waiver was approved on April 8, 2021.

Oregon's SUD system before the waiver

Oregon had covered a range of SUD services before its SUD waiver was approved. Specifically, the state had covered most ASAM levels of care, including outpatient (ASAM level of care 1.0), intensive outpatient (ASAM level of care 2.1), residential (ASAM level of care 3.3-3.7), and medically managed SUD inpatient care (ASAM level 4). Moreover, the state had provided coverage for all three FDA approved OUD medications (methadone, buprenorphine, naltrexone).

Box 1.1 ASAM Criteria

The ASAM Criteria provide tools for clinicians to assess treatment needs of clients with SUD and define a continuum of levels of care into which clients can be placed. Now in its fourth edition, ASAM's continuum four broad treatment levels with sub-levels delineating further gradations in treatment intensity. To place clients at the appropriate level, clinicians complete an assessment of status and risks along six "dimensions," including medical, psychiatric, environmental, and client-centered characteristics. Clients are reassessed regularly as they progress through treatment and may transition between levels.

The ASAM Criteria's Continuum of Care for Adult Addiction Treatment

Level	Decimal levels	Description
Pre-1	0.5	Early intervention **[not in ASAM 4]**
1: Outpatient	1.0	Long-term remission monitoring
	1.5	Outpatient therapy
	1.7	Medically managed outpatient
2: IOP/HIOP	2.1	Intensive outpatient (IOP)
	2.5	High-Intensity Outpatient (HIOP)
	2.7	Medically managed intensive outpatient
3: Residential	3.1	Clinically managed low-intensity residential
	3.5	Clinically managed high-intensity residential services
	3.7	Medically managed residential treatment
4: Inpatient	4	Medically managed inpatient
Source: https://www.asam.org/asam-criteria		

In the years leading up to the waiver, Oregon made further advances in its SUD delivery system. These included:

- **In 2016, the Medication Assisted Treatment-Prescription Drug and Opioid Addiction (MAT-PDOA) grant** sought to increase access to OUD medication treatment by expanding services in selected OTPs, providing training and education opportunities for addiction medicine workforce, and expanding office based opioid treatment options in the north coast region.

- **In 2017, the Opioid State Targeted Response (STR) grant** was used to expand access to recovery services in underserved areas, implement prescription drug overdose coordinators, establish a naloxone distribution network, and increase the number of OTPs in rural areas and providers actively prescribing OUD medication.

- **In 2018, the State Opioid Response grant (SOR)** was used to increase the number of OUD medication providers, provide naloxone distribution and training, and implement peer delivered services in the emergency room.

- **In 2019, the new request for applications (RFA) for the CCO contracting cycle 2020-2024** emphasized policies to improve behavioral health care, for instance by implementing a requirement to provide SUD services withing 72 hours of admission starting in 2020.

Planned waiver activities and concurrent changes

The primary objective of Oregon's waiver was to create a full continuum of care. To this end, the Oregon Health Authority proposed a number of demonstration activities, to be implemented either through waiver authority or by state plan amendments. In what follows, we provide a brief overview of planned activities by continuum of care areas.

- **Access to clinically appropriate levels of care.** Proposed demonstration activities included claiming FFP for services provided in IMDs (previously financed using the state's general fund); and expanding coverage to include early intervention services (ASAM level of care 0.5).

- **Care coordination and community integration.** Planned demonstration activities included providing housing transition services and housing and tenancy sustaining services; expanding coverage for case management services for all individuals with SUD (previously restricted to substance-abusing pregnant women and parents with children under age 18); and covering life skills restoration services (e.g., housing assistance, employment management, money management, nutritional assistance).

- **Recovery support services.** Prior to the waiver, peer delivery services (PDS) were covered for individuals with SUD as part of their treatment plan starting in 2007. PDS providers (peer support specialists and peer wellness specialists) were required to be supervised by qualified clinical supervisors. The waiver proposed to expand coverage for PDS to before and after SUD treatment. Furthermore, OHA would develop certification criteria and begin certification of Peer Run Organizations (PROs). These organizations would be led by individuals with lived experience of mental health or addiction challenges and would be allowed to supervise PDS providers.

- **Prevention.** OHA planned to expand coverage for prevention services (e.g., screening, education) for individuals without SUD and at risk of abusing substances.

- **Crisis intervention.** The proposed waiver activity in this area included covering crisis intervention services for individuals with SUD (previously only covered for individuals with a mental health diagnosis).

The SUD waiver was implemented amidst a number of concurrent developments affecting SUD treatment. Most notably, these were:

- **COVID-19.** The pandemic resulted in important changes to the delivery of substance use services. Notably, the federal government introduced flexibility for OUD medication treatment, including extended eligibility for taking methadone at home and the removal of a waiver requirement for prescribing buprenorphine (the so-called X-waiver).[4] Another important change was the expansion of telehealth: the share of telehealth health visits for behavioral health diagnoses

increased from approximately 10 percent just before the pandemic to almost 40 percent in 2021.[5] However, despite these positive changes, severity of substance use disorders worsened. For instance, alcohol consumption and drinking in excess of recommended guidelines (i.e., more than 3 drinks per day or 7 drinks per week for women and more than 4 drinks per day or 14 drinks per week for men) increased strongly with the onset of the pandemic, and the number of alcohol-related deaths increased from approximately 79,000 to more than 100,000 between 2019 and 2021.[6] Similarly, the number of overdose deaths increased from 70,000 in 2019 to almost 108,000 in 2022. While drug overdose deaths have declined 2023-2024, Oregon is one of a few states for which drug overdoses increased, likely due to the proliferation of fentanyl.

- **Measure 110.** This measure, together with Senate Bill 755, established Behavioral Health Resource Networks to provide community-based services, and reclassified personal, non-commercial possession of controlled substances a class E violation with a maximum fine of $100.[7] In 2024, House Bill 4002 repealed the drug decriminalization part of Measure 110. Overdose deaths increased following the adoption of the measure, but the increase was likely due to a rapid spread in fentanyl during that time.[8]

- **National Opioid Settlement funds.** Since July 2021, Oregon has reached agreements on national lawsuits with several companies regarding their role in the opioid crisis. The agreements award Oregon $600 million through 2040.[9]

- **Increase in reimbursement rates for behavioral health services.** House Bill 5202, adopted in July 2022, appropriates $42.5 million in state general funds to increase rates for behavioral health services by an average of 30 percent.[10] New reimbursement rates were implemented in October 2022.

Findings from the Mid-point assessment

In mid-2022, one year into the waiver, the waiver mid-point assessment (MPA) examined the state's early progress toward waiver milestones and completion of demonstration activities. The MPA drew on claims analyses, the state's implementation action records, and interviews with providers and CCOs to assess progress on implementation. Based on these data sources, the MPA judged two milestones (1 and 6) to be at high risk for incompletion, two milestones (2 and 4) to be at medium risk, and the final two (3 and 5) to be at low risk. The state reported completing all implementation steps in its action plan, and performance on 15 of 27 critical metrics moved in the targeted direction. Interviews with members of the delivery system indicated some areas of progress, most notably:

- **Increases in reimbursement.** Informants cited increased reimbursement to behavioral health providers as an area of progress; this included higher payment rates for residential treatment, coverage of pre-treatment engagement and post-discharge transition planning, and enhanced payment for culturally specific services.

- **Expansion of telehealth.** The continued coverage of telehealth begun during the COVID-19 PHE enhanced access to services, including MAT, which informants reported to be more easily accessible and less stigmatized.

- **Better availability of naloxone.** Some Informants found naloxone to be more broadly available and thought that the waiver had decreased the administrative burden to obtain the medication.

- **Implementation of patient placement criteria.** Most providers approved the adoption of standard patient-placement criteria and considered OHA's shift to "ASAM-like criteria" (i.e., criteria that followed ASAM guidelines but that did not require the use of the ASAM system) to be a positive development. However, some found the placement system burdensome to implement.

However, interview participants also noted several obstacles and challenges:

- **Insufficient capacity.** An important, ongoing barrier to waiver progress cited by providers included continued lack of treatment capacity in the full continuum of care. Withdrawal management and residential treatment were two settings where informants highlighted shortages, and they did not view recent increases in reimbursement rates as sufficient to address severe workforce shortages and stimulate growth in residential capacity.

- **Fragmented communication and policymaking.** A lack of clear technical support from the state had allowed inconsistencies to develop in authorization and payment processes across regions and CCOs, taxing provider resources and slowing uptake of the newly billable pre-engagement and community integration services.

- **Continued gaps in OUD treatment.** While access to OUD medications improved, providers saw regulatory and infrastructure requirements as barriers to offering OUD medications in their programs. They also saw gaps in care for clients who received MAT therapy from clinicians who did not offer comprehensive SUD treatment services such as wraparound supports.

- **System-level barriers to care coordination.** Efforts to improve coordination during transitions between care levels were hampered by limits in access to the full continuum of care and by challenges with health information exchange between organizations.

In addition to these system-level barriers, high levels of unmet social needs among clients and the increased prevalence of fentanyl use in Oregon had heightened clinical burdens for providers during the early waiver period, while also drawing attention away from the needs of clients addicted to non-opioid drugs.

Evaluation Questions and Hypotheses

The approved evaluation plan describes five demonstration goals and related hypotheses that guide the evaluation of Oregon's SUD waiver. The following exhibit lists these demonstration goals and hypotheses.

Exhibit 1. Demonstration goals and corresponding evaluation hypotheses

Demonstration Goal	Evaluation Hypothesis
Goal 1: Increase rates of identification, initiation, and engagement in treatment for OUD and other SUDs.	Hypothesis 1: The demonstration will increase the percentage of beneficiaries who are referred and engage in treatment for OUD and other SUDs.
Goal 2: Improve adherence to and retention in treatment for OUD and other SUDs.	Hypothesis 2: The demonstration will increase the percentage of beneficiaries who adhere to treatment of OUD and SUDs.
Goal 3: Reduce utilization of emergency department and inpatient hospital settings where the utilization is preventable or medically inappropriate through improved access to other continuum of care services.	Hypothesis 3: The demonstration will decrease the rate of emergency department and inpatient visits within the beneficiary population for SUD.
Goal 4: Provide a continuum of care to increase the chances of Medicaid beneficiaries having a successful recovery program.	Hypothesis 4: The demonstration will increase the percentage of beneficiaries with OUD or other SUDs who complete a successful recovery program.
Goal 5: Reduce overdose deaths, particularly those due to opioids.	Hypothesis 5: The demonstration will decrease the rate of overdose deaths due to opioids.

In addition, the evaluation also includes an assessment of changes in Medicaid spending.

Methodology

This chapter contains an overview of the methodology used to carry out the analysis for this report, including data sources, study populations, and analytic methods employed. This project was approved and overseen by the Oregon Health & Science University Institutional Review Board.

Data Sources

This report included data from the following sources:

- **Medicaid claims and enrollment data:** We used Medicaid claims and enrollment data provided by OHA to calculate the claims-based outcome metrics included in this report.
- **Medicare claims and enrollment data:** We used Medicare claims and enrollment data provided by OHA via the APAC database to report on claims-based outcome metrics for dually eligible members.
- **Non-claims data sources:** We used count data provided by OHA to report on the number of providers and facilities available to treat Medicaid members with SUD in Oregon, and data from a variety of other administrative data sources to report on the availability of supportive housing, employment, and peer-delivered services, as well as the rate of overdose deaths.

Study Populations

The study population for this analysis included all Medicaid members eligible for full benefits, with some individual outcome measures specifying a more limited study population for inclusion. For claims-based measures, we also included stratified analysis for each of the following demographic characteristics:

- **Age Group:** We distinguished between the following age groups: children (under 18), adults (18-64) and older adults (65+).
- **Dual-Eligibility Status:** Members were characterized as dually eligible if they were enrolled in both Medicare and Medicaid benefits.
- **Gender:** We distinguished between Medicaid members categorized as male and female.
- **Opioid Use Disorder (OUD):** We identified members with OUD using HEDIS's Opioid Abuse and Dependence value set.
- **Pregnancy Status:** We identified pregnancy based on definitions and code lists provided by CMS.[11]
- **Race and ethnicity:** We distinguished between the following groups: Black, Hispanic/Latine, White, and Other.

- **Geography of residence:** Using rural-urban commuting area codes, we distinguished between the following three geographic categories: isolated, rural, and urban.

Analytic Methods

SUD Performance Metrics

We calculated performance metrics at the member level using Medicaid and Medicare program data, which included enrollment records with information about each member's demographic details, and claims and encounter records with information about the diagnoses and services each member received. We supplemented these claims-based performance metrics with additional non-claims summary information provided by the state. These summary data included information about overdose deaths, the number of providers and facilities available to treat Medicaid members with SUD in Oregon, and details about member's access to supportive housing, employment, and peer-delivered services.

Box 1.2 MAT versus MOUD

Medication-Assisted Treatment (MAT) is a treatment strategy that combines use of OUD medications with counseling and behavioral therapy.

Medications for OUD (MOUD) refers to medication treatment only, without counseling or behavioral therapy.

The two terms are often used interchangeably. In this report, we distinguish between MAT and MOUD when describing treatment options or when reporting results. However, the measure "Medication-Assisted Treatment" does include counseling or behavioral therapy as part of treatment. We kept the name of this measure unchanged to stay consistent with the naming convention of the approved measure list.

Source:
NIOSH [2019]. Medication-assisted treatment for opioid use disorder. By Howard J, Cimineri L, Evans T, Chosewood LC, Afanuh S. Washington, DC: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2019-133. https://doi.org/10.26616/NIOSHPUB2019133

The approved evaluation plan specified relevant performance metrics for each of the five hypotheses (Exhibit 2). Some metrics were included in multiple hypotheses (e.g., early intervention was included in hypotheses 1 and 4). For the spending assessment, we distinguished between total Medicaid spending and several spending categories. All spending metrics were based on claims records.

Exhibit 2. Metrics by hypotheses

Hypothesis 1	#	Performance Metric
	Claims Based Metrics	
The demonstration will increase the percentage of beneficiaries who are referred and engage in treatment for OUD and other SUDs.	6	Any SUD Treatment
	7	Early Intervention
	15.1	Initiation of Treatment for Alcohol Abuse or Dependence
	15.2	Engagement of Treatment for Alcohol Abuse or Dependence
	15.3	Initiation of Treatment for Opioid Abuse or Dependence
	15.4	Engagement of Treatment for Opioid Abuse or Dependence

	15.5	Initiation of Treatment for Other Drug Abuse or Dependence
	15.6	Engagement of Treatment for Other Drug Abuse or Dependence
	15.7	Initiation of Treatment for Total AOD Abuse or Dependence
	15.8	Engagement of Treatment for Total AOD Abuse or Dependence
	22	Continuity of Pharmacotherapy for Opioid Use Disorder
	Non-Claims Based Metrics	
	13	Provider Availability
	14	Provider Availability (MAT)
	n/a	IMDs Providing Treatment for SUD
	n/a	Beds in IMDs Providing Treatment for SUD
Hypothesis 2	#	Performance Metric
The demonstration will increase the percentage of beneficiaries who adhere to treatment of OUD and SUDs	Claims Based Metrics	
	5	Medicaid Beneficiaries Treated in an IMD for SUD
	8	Outpatient Services
	9	Intensive Outpatient and Partial Hospitalization Services
	10	Residential and Inpatient Services
	11	Withdrawal Management
	12	Medication-Assisted Treatment
	32	Access to Preventive/Ambulatory Health Services for Adults with SUD
	36	Average Length of Stay in IMDs
	Non-Claims Based Metrics	
	n/a	Supportive Housing Services
	n/a	Supportive Employment Services
	n/a	Peer-Delivered Services
Hypothesis 3	#	Performance Metric
The demonstration will decrease the rate of emergency department and inpatient visits for SUD	Claims Based Metrics	
	17.1	Follow-up after ED Visit for AOD: Age 18 and older (7 days)
	17.1	Follow-up after ED Visit for AOD: Age 18 and older (30 days)
	17.2	Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days)
	17.2	Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days)
	23	ED Utilization for SUD
	24	Inpatient Stays for SUD
	Non-Claims Based Metrics	

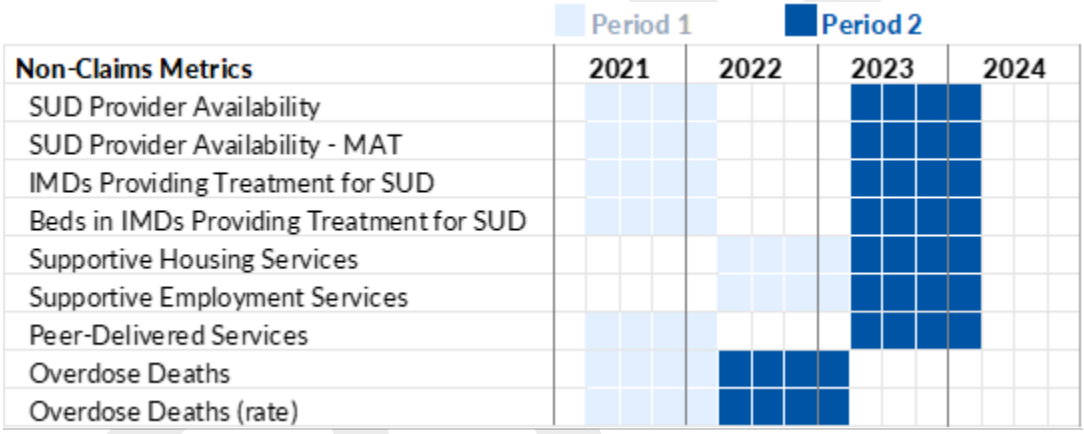
	n/a	Supportive Housing Services
	n/a	Supportive Employment Services
	n/a	Peer-Delivered Services
Hypothesis 4	#	Performance Metric
The demonstration will increase the percentage of beneficiaries with OUD or other SUDs who complete a successful recovery program	Claims Based Metrics	
	7	Early Intervention
	22	Continuity of Pharmacotherapy for Opioid Use Disorder
	25	Readmissions Among Beneficiaries with SUD
	Non-Claims Based Metrics	
	13	Provider Availability
	n/a	IMDs Providing Treatment for SUD
	n/a	Beds in IMDs Providing Treatment for SUD
	n/a	Supportive Housing Services
	n/a	Supportive Employment Services
	n/a	Peer-Delivered Services
Hypothesis 5	#	Performance Metric
The demonstration will decrease the rate of overdose deaths due to opioids	Claims Based Metrics	
	18	Use of Opioids at High Dosage in Persons Without Cancer
	21	Concurrent Use of Opioids and Benzodiazepines
	Non-Claims Based Metrics	
	26	Count of Overdose Deaths Due to Any Opioid
	27	Rate of Overdose Deaths Due to Any Opioid
Cost Metrics		
ED Spending		
Other Outpatient Spending		
Inpatient Spending		
Prescription Drug Spending		
Behavioral Health Spending		
Total Spending		
SUD IMD Spending		
SUD Non-IMD Spending		
Non-SUD Spending		

Analysis

We calculated average outcomes levels for the pre-intervention period, defined as the years 2017-2019, and for 2022, which included the early post-intervention period. We also compared claims-based outcomes during these time periods using pre-post regression analysis to measure change associated with Oregon's SUD Waiver implementation (see Attachment for details). The regression analysis adjusted for demographic characteristics (age group, gender, race, and geography of residence). Estimates of the adjusted change were listed in tables throughout this report as "Adjusted Change."

A sub-set of performance metrics included in this evaluation were not derived from claims data. Pre-post analysis was not possible for these metrics because they were not collected before waiver implementation. Instead, we reported levels during the first and most recent period for which data was available (Exhibit 3). We also reported changes between the two periods. We did not assess changes stratified by subgroups for these measures because such information was either not available or not defined for them.

Exhibit 3. Reporting periods to assess changes for non-claims metrics



Methodological Limitations

Our analyses had a number of limitations, most notably:

- **Impacts of the COVID-19 pandemic.** The pandemic likely resulted in state-wide changes to some metrics included in this evaluation. Our pre-post research design cannot easily distinguish between these state-wide changes that were unrelated to waiver implementation and waiver-related changes. For the summative report, we intend to use national Medicaid data to compare changes in outcome measures in Oregon to changes in other states that did not implement an SUD waivers. Using non-waiver states as comparison group allows us to estimate changes due to the pandemic and thus more credibly distinguish between pandemic and waiver-related changes.

- **Incomplete assessment of possible positive waiver effects.** While our assessment included a large number of measures, it may not fully capture all outcomes relevant to Medicaid members with SUD. For instance, PDS may positively non-medical aspects of quality of life such as affect employment or stability of relationships, which were not captured by our analysis.

- **Lack of qualitative information.** This interim report, unlike the MPA and the summative report, did not include qualitative information. Thus, while our analysis was able to assess changes in pre-defined measures, it was not designed to identify possible explanations for observed changes by leveraging insights from providers, state officials and other individuals knowledgeable about the waiver.

- **Missing information in prescription claims.** In APAC data, about a quarter of prescription claims had a day supply listed as zero. For these records, we set days supply to 1. While we considered this to be a reasonable imputation, it should be noted that results for measures using prescription claims would be sensitive to alternative approaches (e.g., removing these claims records from the analyses).

- **Limited dates available for Medicare claims:** The earliest Medicare claims available for this analysis were for calendar year 2017. This aligns with our earliest measurement period, however, some performance metrics included in this analysis require an additional year of look-back data for calculation. In these cases, our pre-period analysis was limited to 2018 & 2019 for dually eligible members.

- **Irregularities in National Provider Identifiers (NPIs) from Medicare claims:** We identified some irregularities in the NPIs recorded in the Medicare data and are unable to report on some performance metrics that rely on this value for dually eligible members. We dropped dually-eligible members from the analysis of performance metrics related to treatment and cost of care in an IMD.

How to Read this Report

To better visualize relevant changes and detect patterns across measures and subpopulations, we used colors to signify the direction and strength of changes. Specifically, shades of blue indicate **improvements,** whereas shades of orange indicate **worsening** rates. Furthermore, the magnitude of change relative to the pre-COVID period (2017-2019) was indicated using lighter and deeper shading, as shown by Exhibit 4. Of note, shading is based on the adjusted change relative to the pre-COVID period. Such relative changes may not always correspond to large absolute changes. For instance, an increase from 2.0 per member per months (PMPM) during the pre-COVID period to 2.6 PMPM in 2022 constituted a 30% change relative to the pre-COVID period and thus would be classified as a moderate change, even though the absolute change (0.6 PMPM) may appear to be small.

Exhibit 4. Color coding for changes in metrics

For one performance metrics (Average Length of Stay in IMDs), we refrained from making a judgement about the desired direction of change, because it was not clear whether a longer or shorter average length of stay should be considered an improvement. For this measure, we used a gray scale to highlight significant changes and indicate their magnitude (Exhibit 5).

Exhibit 5. Grey shades used for Average Length of Stay in IMDs

We used colors or grey shades only for adjusted changes that were statistically significant (p-value < 0.05). Conversely, we did not color cells for which observed changes were statistically insignificant (i.e., the cells color was kept white). We further added an asterisk to adjusted changes that were statistically significant at the 0.01 level.

In some cases, performance metrics were not applicable to a specific sub-population. We marked these cells with a dash and did not color them. We similarly used a dash and no coloring to suppress results for which the sample size was too low (i.e., fewer than 11 Medicaid members in the numerator or fewer than 51 Medicaid members in the denominator).

The following table illustrates our approach to color coding results using results for the third hypothesis and the full study population (Exhibit 6). Most changes between the pre-period and 2022 were significant and had been color coded accordingly. Moreover, color coded changes were all significant at the 0.01 level, as indicated by the asterisk. However, the rates of follow-up care after an ED visit for alcohol or other drugs, both at 7 and 30 days, were not significant, so those cells have been left white.

Exhibit 6. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	13.56	13.89	0.42
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	24.73	24.91	0.30
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	47.1	42.8	-4.4*
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	64.4	59.5	-5.1*
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	3.0	2.1	-1.1*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	0.69	0.55	-0.20*

We did not conduct statistical testing for non-claims based metrics, but still used the color code described above to highlight the direction and magnitude of observed change. To differentiate these tables from those where statistical testing for significance was applied, we only colored cell borders in these instances.

Results

In this section, we present and describe the results of our quantitative analyses. Our presentation is organized by hypotheses. The end of this section also includes a description of results for changes in spending.

Hypothesis 1: The demonstration will increase rates of identification, initiation, and engagement in treatment for OUD and other SUDs

We present findings first for the full population and then stratified by subgroups comparing the 2017-2019 period with 2022.

Results for the full population

Exhibit 7 displays measures related to hypothesis 1 for the full study population. The percent of Medicaid members who were diagnosed with an SUD and received treatment services decreased moderately from 2.60 to 2.27 percent, which represented an adjusted change of 0.53 percent relative to baseline levels. The rate of Medicaid members receiving early intervention declined strongly, from 0.02 per 1,000 PMPM to 0.01 1,000 PMPM (adjusted change: -0.02 per 1,000 PMPM). The adjusted change, while small in absolute levels, was large compared to pre-period levels due to a low prevalence for this measure.

Results for initiation and engagement in SUD treatment were mixed. Initiation and engagement for opioid abuse or dependence increased slightly (adjusted change: 4.7 percent and 1.3 percent, respectively), but there were small to moderate declines for initiation and engagement of treatment for alcohol abuse or dependency (adjusted change: -0.86 percent and -2.6 percent, respectively), and moderate to large declines for initiation and engagement of treatment for other drug abuse or dependence (adjusted change: -5.0 percent and -5.5 percent, respectively). Altogether, initiation and engagement of treatment for total AOD abuse or dependence declined slightly (adjusted changes: 0.64 percent and -2.1 percent).

The last claims-based measure included in this hypothesis, continuity of pharmacotherapy for OUD, also declined moderately, from 21.6 percent to 17.0 percent (adjusted change: -4.4 percent).

The number of available SUD providers increased moderately from 15,411 April 2021 - March 2022 to 18,240 two years later (Exhibit 8). Similarly, the number of available SUD providers for MAT also increased strongly from 2,350 to 2,996 during that period. However, the number of SUD IMDs providing SUD treatment decreased from 36 to 27, and the number of SUD beds in IMDs decreased from 1,344 to 1,251 during the same period.

Exhibit 7. Levels and adjusted changes for claims-based measures related to referral and engagement in OUD and other SUD treatment, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
06. Any SUD Treatment (%)	2.60	2.27	-0.53*
07. Early Intervention (1,000 PMPM)	0.02	0.01	-0.02*
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	37.76	37.04	-0.86
15.2. Engagement in Treatment for Alcohol Abuse or Dependence (%)	21.4	18.6	-2.6*
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	52.8	57.8	4.7*
15.4. Engagement in Treatment for Opioid Abuse or Dependence (%)	31.3	31.8	1.3
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	35.7	30.9	-5.0*
15.6. Engagement in Treatment for Other Drug Abuse or Dependence (%)	19.5	13.7	-5.5*
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	38.53	38.17	-0.64
15.8. Engagement in Treatment for Total AOD Abuse or Dependence (%)	21.0	18.6	-2.1*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	21.6	17.0	-4.4*

Exhibit 8. Levels and changes for non-claims measures related to referral and engagement in OUD and other SUD treatment, full study population

Metric	2021	2022	2023	Change
13. Provider Availability (n)	15411	-	18240	2829
14. Provider Availability - MAT (n)	2350	-	2996	646
SUD IMDs Providing Treatment for SUD (n)	36	-	27	-9
Beds in SUD IMDs Providing Treatment for SUD (n)	1344	-	1251	-93

Results stratified by age groups

Medicaid members ages 18-64 years had similar changes compared to the full population: initiation and engagement for opioid abuse or dependence increased for this age group, whereas other measures all declined (Exhibit 9). Two changes (initiation of treatment for alcohol abuse or dependence and initiation of treatment for total AOD abuse or dependence) were not statistically significant.

Medicaid members younger than 18 years experienced a strong decline in any SUD treatment (adjusted change: -0.09 percent). Changes in early intervention were not statistically significant. Results for other measures were not reported due to a small sample size.

Any SUD treatment improved moderately relative to pre=COVID levels among Medicaid members 65 years and older (adjusted change: 0.37 percent). However, most initiation and engagement measures declined moderately to strongly for this age group. In contrast to the full study population, initiation of treatment for opioid abuse or dependence declined moderately compared to pre-waiver levels (adjusted change: -14.0 percent), and the change in engagement for treatment of opioid abuse or dependence was not statistically significant.

Exhibit 9. Levels and adjusted changes for claims-based measures related to referral and engagement in OUD and other SUD treatment, by age groups

Metric	<18 yrs	18-64 yrs	65+ yrs
06. Any SUD Treatment (%)	-0.09*	-0.84*	0.37*
07. Early Intervention (1,000 PMPM)	0.00	-0.03*	-
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	-	-0.51	-11.3*
15.2. Engagement in Treatment for Alcohol Abuse or Dependence (%)	-	-2.5*	-4.7*
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	-	6.3*	-14.0*
15.4. Engagement in Treatment for Opioid Abuse or Dependence (%)	-	1.6	-1.4
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	-	-4.7*	-15.6*
15.6. Engagement in Treatment for Other Drug Abuse or Dependence (%)	-	-5.6*	-3.2
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	-	-0.07	-14.1*
15.8. Engagement in Treatment for Total AOD Abuse or Dependence (%)	-	-2.0*	-3.1*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-	-4.5*	-3.6*
SUD IMDs Providing Treatment for SUD (n)	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-

Results stratified by dual eligibility, pregnancy, and OUD diagnosis

All initiation and engagement measures declined moderately to strongly for those dually eligible, including declines for opioid abuse or dependence (adjusted change: -17.6 percent and –5.4 percent, respectively; Exhibit 10). However, any SUD treatment increased slightly (adjusted change: 0.21 percent).

For pregnant Medicaid members, a moderate increase for treatment initiation for opioid abuse or dependence (adjusted change: 6.7 percent) contrasted with a strong decline in early intervention (adjusted change: -0.03 per 1,000 PMPM) and moderate declines in any SUD treatment (adjusted change: -0.65 percent) as well as continuity of pharmacotherapy for OUD (adjusted change: -4.3 percent). Changes for other measures were not statistically significant.

Results were slightly more positive for Medicaid members with an OUD diagnosis. Specifically, three measures increased: any SUD treatment (adjusted change: 0.85 percent), treatment initiation for opioid abuse or dependence (adjusted change: 3.5 percent), and initiation of treatment for total AOD abuse or dependence (adjusted change: 2.3 percent). However, early intervention declined substantially (adjusted change: -0.15 per 1,000 PMPM), and measures of initiation and engagement for other drug abuse or dependence and for continuity of pharmacotherapy for OUD declined moderately to strongly for this group. Other changes were not statistically significant.

Exhibit 10. Levels and adjusted changes for claims-based measures related to referral and engagement in OUD and other SUD treatment, by Medicaid members who are dually eligible, pregnant, and diagnosed with an OUD

Metric	Dual Eligible	Pregnant	OUD
06. Any SUD Treatment (%)	0.21*	-0.65*	0.85*
07. Early Intervention (1,000 PMPM)	0.00	-0.03*	-0.15*
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	-12.3*	-1.5	0.44
15.2. Engagement in Treatment for Alcohol Abuse or Dependence (%)	-6.1*	-1.0	-2.1
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	-17.6*	6.7	3.5*
15.4. Engagement in Treatment for Opioid Abuse or Dependence (%)	-5.4*	-0.68	0.85
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	-15.9*	0.30	-8.8*
15.6. Engagement in Treatment for Other Drug Abuse or Dependence (%)	-3.9*	-1.6	-10.6*
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	-15.5*	1.8	2.3*
15.8. Engagement in Treatment for Total AOD Abuse or Dependence (%)	-5.0*	0.59	-0.02
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-3.1*	-4.3*	-4.4*
SUD IMDs Providing Treatment for SUD (n)	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-

Results stratified by sex

Changes in hypothesis 1 measures for those classified as female and those classified as male were similar to changes for the full population (Exhibit 11). Among Medicaid members classified as female, declines were large for early intervention (adjusted change: -0.01 per 1,000 PMPM) and engagement of treatment for other drug abuse or dependence (-5.2 percent). By contrast, initiation of treatment for opioid abuse or dependence increased (adjusted change: 2.8 percent).

Among Medicaid members classified as male, three measures declined substantially: early intervention (adjusted change: -0.02 per 1,000 PMPM), engagement of treatment for other drug abuse or dependence (adjusted change: -5.8 percent), and continuity of pharmacotherapy for OUD (-5.4 percent). Initiation of treatment for opioid abuse or dependence improved moderately (adjusted change: 5.8 percent), and engagement of treatment for opioid abuse or dependence improved slightly (adjusted change: 1.9 percent).

Exhibit 11. Levels and adjusted changes for claims-based measures related to referral and engagement in OUD and other SUD treatment, by sex

Metric	Female	Male
06. Any SUD Treatment (%)	-0.38*	-0.70*
07. Early Intervention (1,000 PMPM)	-0.01*	-0.02*
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	-0.66	-0.97
15.2. Engagement in Treatment for Alcohol Abuse or Dependence (%)	-2.3*	-2.7*
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	2.8*	6.8*
15.4. Engagement in Treatment for Opioid Abuse or Dependence (%)	0.68	1.9
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	-4.1*	-5.8*
15.6. Engagement in Treatment for Other Drug Abuse or Dependence (%)	-5.2*	-5.8*
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	-0.74	-0.56
15.8. Engagement in Treatment for Total AOD Abuse or Dependence (%)	-2.0*	-2.1*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-3.5*	-5.4*
SUD IMDs Providing Treatment for SUD (n)	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-

Results stratified by race and ethnicity

Changes in claims-based measures were similar among Medicaid members classified as white compared to the full population (Exhibit 12). Specifically, initiation and engagement of treatment for opioid abuse or dependence increased slightly, and other measures either declined, or changes were not significant.

Exhibit 12. Levels and adjusted changes for claims-based measures related to referral and engagement in OUD and other SUD treatment, by race and ethnicity

Metric	Black	Hispanic/ Latine	White	Other Race
06. Any SUD Treatment (%)	-1.0*	-0.22*	-0.36*	-0.40*
07. Early Intervention (1,000 PMPM)	-	-0.01*	-0.01*	-0.02*
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	1.6	-0.96	-0.49	-1.7
15.2. Engagement in Treatment for Alcohol Abuse or Dependence (%)	1.3	-2.6	-2.5*	-3.3
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	-1.8	4.3	4.5*	10.7*
15.4. Engagement in Treatment for Opioid Abuse or Dependence (%)	-6.6	3.8	2.0*	8.9*
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	1.2	-0.70	-5.6*	-1.0
15.6. Engagement in Treatment for Other Drug Abuse or Dependence (%)	-2.1	-1.8	-5.7*	-2.6
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	0.68	-0.54	-0.46	1.2
15.8. Engagement in Treatment for Total AOD Abuse or Dependence (%)	-1.8	-1.8	-1.7*	0.14
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-6.3*	-1.9	-5.3*	-5.9*
SUD IMDs Providing Treatment for SUD (n)	-	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-	-

Two measures declined strongly for Medicaid members classified as Black: any SUD treatment (adjusted change: -1.0 percent) and continuity of pharmacotherapy for OUD (adjusted change: -6.3 percent), and one more measure, engagement of treatment for opioid abuse or dependence, declined moderately (adjusted change: -6.6 percent). Changes for other measures were not statistically significant, or, for early intervention, suppressed due to a small sample size.

Medicaid members classified as Hispanic or Latine experienced a moderate decline in any SUD treatment (adjusted change: 0.22 percent) and a large decline in early intervention (adjusted change: -0.01 per 1,000

PMPM). Changes in other measures were not statistically significant.

For Medicaid members classified as other race, initiation and engagement of treatment for opioid abuse or dependence increased moderately to strongly (adjusted change: 10.7 percent and 8.9 percent, respectively). However, four measures declined moderately to strongly: any SUD treatment, early intervention, engagement of treatment for alcohol abuse or dependence, and continuity of pharmacotherapy for OUD. Changes in other measures were not statistically significant.

Results stratified by geographic areas

Results for Medicaid members living in urban areas were similar to those for the full population, with slight to moderate increases for initiation and engagement for opioid abuse or dependence, and small to large declines for most other measures (Exhibit 13). One change, for initiation of treatment for total AOD abuse or dependence, was not statistically significant.

Exhibit 13. Levels and adjusted changes for claims-based measures related to referral and engagement in OUD and other SUD treatment, by geographical areas

Metric	Isolated	Rural	Urban
06. Any SUD Treatment (%)	-0.36*	-0.33*	-0.59*
07. Early Intervention (1,000 PMPM)	-0.01	-0.02*	-0.01*
15.1. Initiation of Treatment for Alcohol Abuse or Dependence (%)	2.8	-0.29	-1.2
15.2. Engagement in Treatment for Alcohol Abuse or Dependence (%)	0.77	-1.3	-3.1*
15.3. Initiation of Treatment for Opioid Abuse or Dependence (%)	7.5	1.2	5.5*
15.4. Engagement in Treatment for Opioid Abuse or Dependence (%)	6.1	-0.40	1.6
15.5. Initiation of Treatment for Other Drug Abuse or Dependence (%)	-6.3*	-7.0*	-4.3*
15.6. Engagement in Treatment for Other Drug Abuse or Dependence (%)	-7.2*	-5.5*	-5.5*
15.7. Initiation of Treatment for Total AOD Abuse or Dependence (%)	1.5	-1.8*	-0.39
15.8. Engagement in Treatment for Total AOD Abuse or Dependence (%)	0.43	-1.7*	-2.3*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-6.8*	-4.8*	-4.3*
SUD IMDs Providing Treatment for SUD (n)	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-

Among Medicaid members living in isolated areas, any SUD treatment (adjusted change: -0.36 percent) and initiation of treatment for other drug abuse or dependence (adjusted change: -6.3 percent) declined moderately, and engagement of treatment for other drug abuse or dependence (adjusted change: -7.2 percent) and continuity of pharmacotherapy for OUD declined strongly (adjusted change: -6.8 percent). Changes for other measures were not statistically significant.

A majority of measures declined for Medicaid members residing in rural areas: any SUD treatment, early intervention, initiation and engagement of treatment for other drug abuse or dependence, initiation and engagement of treatment for total AOD abuse or dependence, and continuity of pharmacotherapy for OUD. Of these, early intervention (adjusted change: -0.02) and engagement of treatment for other drug abuse or dependence (adjusted change: -5.3 percent) declined strongly. Other changes were not statistically significant.

Hypothesis 2: The demonstration will improve adherence to and retention in treatment for OUD and other SUDs

We present findings first for the full population and then stratified by subgroups.

Results for the full population

Most claims-based measures for the second hypothesis did not move in the desired direction (Exhibit 14). The rate of Medicaid beneficiaries treated in an IMD for SUD declined strongly from 6.4 to 4.9 per 1,000 PMPM, which corresponded to an adjusted change of 1.9 per 1,000 PMPM. Moderate to strong declines were also observed for outpatient services (adjusted change: 6.6 per 1,000 PMPM), intensive outpatient and partial hospitalization services (adjusted change: 0.38 per 1,000 PMPM), residential and inpatient services (adjusted change: -0.14 per 1,000 PMPM), and withdrawal management (adjusted change: 0.18 per 1,000 PMPM). Furthermore, access to preventive or ambulatory health services declined slightly from 89.5 percent to 86.1 percent (adjusted change: 3.3 percent).

One positive finding was a moderate increase in medication-assisted treatment from 10.6 percent to 12.7 percent (adjusted change: 1.3 percent).

The last claims-based measure for this hypothesis, average length of stay in IMDs, declined moderately from 21.2 days to 17.1 days (adjusted change: -3.9 days). As mentioned in the methods section, this change was not classified as an improvement or deterioration.

The number of Medicaid members receiving supportive housing, supportive employment and peer-delivered services increased strongly during the initial years of the waiver (Exhibit 15). Specifically, the number of Medicaid members receiving supportive housing increased from 15 during the period April 2022 - March 2023 to 56 one year later, and the number of Medicaid members receiving supportive employment increased from 91 to 432 during the same period. The number of Medicaid members receiving peer-delivered services increased from 8,040 during the period April 2021 - March 2022 to 11,664 two years later.

Exhibit 14. Levels and adjusted changes for claims-based measures related to treatment adherence, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	6.4	4.9	-1.9*
08. Outpatient Services (1,000 PMPM)	20.8	15.7	-6.6*
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	1.99	1.75	-0.38*
10. Residential and Inpatient Services (1,000 PMPM)	0.41	0.29	-0.14*
11. Withdrawal Management (1,000 PMPM)	0.77	0.65	-0.18*
12. Medication-Assisted Treatment (1,000 PMPM)	10.6	12.7	1.3*
32. Access to Preventive/Ambulatory Health Services for Adults with SUD (%)	89.5	86.1	-3.3*
36. Average Length of Stay in IMDs (days)	21.2	17.1	-3.9*

Exhibit 15. Levels and changes for non-claims measures related to treatment adherence, full study population

Metric	2021	2022	2023	Change
Supportive Housing Services- Access & Utilization (n)	-	15	56	41
Supportive Employment Services- Access & Utilization (n)	-	91	432	341
Peer-Delivered Services (n)	8040	-	11664	3624

Results stratified by age groups

Results for Medicaid members ages 18-64 were similar to the overall population: medication-assisted treatment increased slightly, whereas all other measures decreased (Exhibit 16). Declines were large for Medicaid beneficiaries treated in an IMD for SUD (adjusted change: -2.7 per 1,000 PMPM), outpatient services (adjusted change: -10.4 per 1,000 PMPM), and residential and inpatient services (adjusted change: -0.22 per 1,000 PMPM).

Changes were slightly more positive among the youngest age group. Specifically, intensive outpatient and partial hospitalization services increased strongly (adjusted change: 0.01 per 1,000 PMPM), as did medication-assisted treatment (adjusted change: 0.04 per 1,000 PMPM). However, three measures declined strongly: Medicaid beneficiaries treated in an IMD for SUD (adjusted change: -0.47 per 1,000

PMPM), outpatient services (adjusted change: -0.82 per 1,000 PMPM), and residential and inpatient services (adjusted change: 0.03 per 1,000 PMPM).

For Medicaid members older than 65, medication-assisted treatment increased strongly (adjusted change: 2.8 per 1,000 PMPM). Residential and inpatient services and access to preventive or ambulatory health services declined slightly. Changes for other measures were not statistically significant.

Exhibit 16. Levels and adjusted changes for claims-based measures related to treatment adherence, by age groups

Metric	<18 yrs	18-64 yrs	65+ yrs
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	-0.47*	-2.7*	-0.39
08. Outpatient Services (1,000 PMPM)	-0.82*	-10.4*	0.66
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	0.01*	-0.64*	0.03
10. Residential and Inpatient Services (1,000 PMPM)	-0.03*	-0.22*	-0.03
11. Withdrawal Management (1,000 PMPM)	-	-0.30*	0.00
12. Medication-Assisted Treatment (1,000 PMPM)	0.04*	2.0*	2.8*
32. Access to Preventive/Ambulatory Health Services for Adults with SUD (%)	-	-3.4*	-1.5*
36. Average Length of Stay in IMDs (days)	-6.8	-4.0*	-
Supportive Housing Services- Access & Utilization (n)	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-
Peer-Delivered Services (n)	-	-	-

Results stratified by dual eligibility, pregnancy, and OUD diagnosis

Changes for dually eligible Medicaid members were somewhat similar to the full population, with medication-assisted treatment increasing and other measures declining (Exhibit 17). One change, for outpatient and partial hospitalization services, was large (adjusted change: -0.25 per 1,000 PMPM). One measure was suppressed due to a small sample size, and changes for two other measures were not statistically significant.

For pregnant Medicaid members, five measures decreased: treatment in an IMD, use of outpatient services, use residential and inpatient services, access to preventive or ambulatory health services, and average length of stay in IMDs. Of these, changes for outpatient services (adjusted change: -8.4 per 1,000 PMPM) and residential and inpatient services (adjusted change: -0.22 per 1,000 PMPM) were substantial. Changes for other measures were not statistically significant.

Changes for Medicaid members diagnosed with an OUD were fairly similar to changes for the full population. Specifically, medication-assisted treatment improved for this group, whereas most other measures declined slightly to moderately, with one exception: the change for intensive outpatient and partial hospitalization services was not statistically significant. Substantial adjusted changes for some measures corresponded to moderate relative changes due to a high baseline level for this population (e.g., medication-assisted treatment).

Exhibit 17. Levels and adjusted changes for claims-based measures related to treatment adherence, by Medicaid members who are dually eligible, pregnant, and diagnosed with an OUD

Metric	Dual Eligible	Pregnant	OUD
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	-	-2.5*	-21.9*
08. Outpatient Services (1,000 PMPM)	-2.0*	-8.4*	-50.5*
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	-0.25*	-0.26	-2.3*
10. Residential and Inpatient Services (1,000 PMPM)	-0.01	-0.22*	-1.4*
11. Withdrawal Management (1,000 PMPM)	-0.02	0.07	-1.5*
12. Medication-Assisted Treatment (1,000 PMPM)	2.6*	1.2	57.8*
32. Access to Preventive/Ambulatory Health Services for Adults with SUD (%)	-1.4*	-1.7*	-2.8*
36. Average Length of Stay in IMDs (days)	-	-7.3*	-3.4*
Supportive Housing Services- Access & Utilization (n)	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-
Peer-Delivered Services (n)	-	-	-

Results stratified by sex

Results stratified by sex were very similar to findings for the full population (Exhibit 18). Three measures declined strongly for both Medicaid members classified as female and male: treatment in an IMD, use of outpatient services, and use of residential and inpatient services. Two measures declined moderately to strongly for the two groups: use of intensive outpatient and partial hospitalization services and withdrawal management. One measure, access to preventive or ambulatory health services declined slightly.

Medication-assisted treatment increased slightly for both Medicaid members classified as female and those classified as male (adjusted change: 1.3 per 1,000 PMPM for both groups).

Average length of state declined for both groups moderately (adjusted change, women: -5.3 days; adjusted change, men: -3.0 days).

Exhibit 18. Levels and adjusted changes for claims-based measures related to treatment adherence, by sex

Metric	Female	Male
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	-1.7*	-2.1*
08. Outpatient Services (1,000 PMPM)	-5.5*	-8.0*
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	-0.29*	-0.50*
10. Residential and Inpatient Services (1,000 PMPM)	-0.12*	-0.17*
11. Withdrawal Management (1,000 PMPM)	-0.11*	-0.27*
12. Medication-Assisted Treatment (1,000 PMPM)	1.3*	1.3*
32. Access to Preventive/Ambulatory Health Services for Adults with SUD (%)	-3.0*	-3.5*
36. Average Length of Stay in IMDs (days)	-5.3*	-3.0*
Supportive Housing Services- Access & Utilization (n)	-	-
Supportive Employment Services- Access & Utilization (n)	-	-
Peer-Delivered Services (n)	-	-

Results stratified by race and ethnicity

Changes by race and ethnicity were similar to changes for the full study population (Exhibit 19). Specifically, five measures that declined for the full population also declined for all four race and ethnicity groups: treatment in an IMD for SUD, outpatient services, residential and inpatient services, access to preventive or ambulatory health services, and average length of stay in IMDs.

A few notable exceptions existed for other measures. Specifically, use of intensive outpatient and partial hospitalization services declined only for those classified as Black, and withdrawal management only declined for those classified as white; changes for these two measures for other groups were not statistically significant. Moreover, while medication-assisted treatment improved moderately to strongly for Medicaid members classified as Hispanic or Latine, white and other race, the measure declined for those classified as Black (adjusted change: -1.8 per 1,000 PMPM).

Exhibit 19. Levels and adjusted changes for claims-based measures related to treatment adherence, by race and ethnicity

Metric	Black	Hispanic/ Latine	White	Other Race
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	-1.9*	-0.36*	-1.2*	-0.75*
08. Outpatient Services (1,000 PMPM)	-10.4*	-2.2*	-6.3*	-4.7*
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	-0.38*	-0.02	-0.06	0.01
10. Residential and Inpatient Services (1,000 PMPM)	-0.24*	-0.07*	-0.10*	-0.22*
11. Withdrawal Management (1,000 PMPM)	-0.05	-0.01	-0.07*	-0.01
12. Medication-Assisted Treatment (1,000 PMPM)	-1.8*	0.49*	3.3*	1.6*
32. Access to Preventive/Ambulatory Health Services for Adults with SUD (%)	-4.4*	-4.3*	-3.6*	-4.5*
36. Average Length of Stay in IMDs (days)	-10.5*	-3.7	-3.6*	-4.0
Supportive Housing Services- Access & Utilization (n)	-	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-	-
Peer-Delivered Services (n)	-	-	-	-

Results stratified by geographic areas

Changes for Medicaid members residing in isolated, rural and urban areas were similar to overall changes (Exhibit 20). Specifically, six measures declined across all geographic areas: treatment in an IMD for SUD, outpatient services, residential and inpatient services, withdrawal management, access to preventive or ambulatory health services, and average length of stay in IMDs. Conversely, medication-assisted treatment increased for all three groups.

Just one measure, use of intensive outpatient and partial hospitalization services, did not decline among those residing in rural areas. The measure declined moderately for Medicaid members residing in isolated or urban areas.

Exhibit 20. Levels and adjusted changes for claims-based measures related to treatment adherence, by geographical areas

Metric	Isolated	Rural	Urban
05. Medicaid Beneficiaries Treated in an IMD for SUD (1,000 PMPM)	-0.85	-1.4*	-2.0*
08. Outpatient Services (1,000 PMPM)	-5.2*	-5.1*	-7.1*
09. Intensive Outpatient and Partial Hospitalization Services (1,000 PMPM)	-0.20	0.01	-0.50*
10. Residential and Inpatient Services (1,000 PMPM)	-0.14*	-0.15*	-0.14*
11. Withdrawal Management (1,000 PMPM)	-0.11*	-0.14*	-0.20*
12. Medication-Assisted Treatment (1,000 PMPM)	3.2*	3.5*	0.57*
32. Access to Preventive/Ambulatory Health Services for Adults with SUD (%)	-3.1*	-2.9*	-3.4*
36. Average Length of Stay in IMDs (days)	-7.8*	-5.0*	-3.5*
Supportive Housing Services- Access & Utilization (n)	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-
Peer-Delivered Services (n)	-	-	-

Hypothesis 3: The demonstration will reduce preventable or medically inappropriate emergency department and inpatient hospital utilization

We present findings first for the full population and then stratified by subgroups.

Results for the full population

Results for the third hypothesis were mixed: two measures improved strongly, two measures got slightly worse, and changes for the remaining two measures moved in the desired direction but were not statistically significant (Exhibit 21).

Regarding measures that improved, ED utilization for SUD decreased from 3.0 per 1,000 PMPM to 2.1 per 1,000 (adjusted change: -1.1 per 1,000 PMPM). Similarly, inpatient stays for SUD declined from 0.69 per 1,000 PMPM to 0.55 per 1,000 PMPM (adjusted change: -0.20 per 1,000 PMPM). For both measures, the decline constituted an improvement.

By contrast, 7-days follow-up after ED visit for mental illness decreased slightly from 47.1 percent to 42.8 percent (adjusted change: -4.4 percent). Similarly, 30-days follow-up after ED visit for mental illness decreased slightly from 64.4 percent to 59.5 percent (adjusted change: -5.1 percent).

Both 7-days and 30-days follow-up after ED visit for AOD increased slightly, but changes were not statistically significant.

Exhibit 21. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	13.56	13.89	0.42
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	24.73	24.91	0.30
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	47.1	42.8	-4.4*
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	64.4	59.5	-5.1*
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	3.0	2.1	-1.1*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	0.69	0.55	-0.20*

Non-claims measures for this hypothesis were identical to those for the second hypothesis: the number of Medicaid members receiving supportive housing, supportive employment, and peer-delivered services. All three measures increased strongly during the early waiver period (Exhibit 22).

Exhibit 22. Levels and adjusted changes for non-claims measures related to emergency department and inpatient hospital utilization, full study population

Metric	2021	2022	2023	Change
Supportive Housing Services- Access & Utilization (n)	-	15	56	41
Supportive Employment Services- Access & Utilization (n)	-	91	432	341
Peer-Delivered Services (n)	8040	-	11664	3624

Results stratified by age groups

Changes for Medicaid members ages 18-64 years and Medicaid members older than 65 years were similar to overall changes, with declines for 7-days and 30-days follow-up after ED visit for mental illness, ED utilization for SUD, and inpatient stays for SUD (Exhibit 23). Changes in measures for follow-up after ED visit for AOD were not statistically significant.

For those younger than 18 years, ED utilization for SUD declined strongly (adjusted change: -0.05 per 1,000 PMPM). Changes in inpatient stay were not statistically significant, and other changes were suppressed due to a small sample size.

Exhibit 23. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, by age groups

Metric	<18 yrs	18-64 yrs	65+ yrs
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	-	0.36	2.6
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	-	0.31	0.34
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	-	-4.3*	-7.6
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	-	-4.9*	-8.6
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	-0.05*	-1.8*	-0.46*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	0.00	-0.31*	-0.24*
Supportive Housing Services- Access & Utilization (n)	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-
Peer-Delivered Services (n)	-	-	-

Results stratified by dual eligibility, pregnancy, and OUD diagnosis

Follow-up after ED visit for mental illness (7-day and 30-day), ED utilization for SUD and inpatient stays for SUD all declined among dually eligible Medicaid members and Medicaid members with an OUD diagnosis, similar to the full population (Exhibit 24).

ED utilization for SUD also declined among pregnant Medicaid members. Changes in other measures were not statistically significant for this group.

Exhibit 24. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, by Medicaid members who are dually eligible, pregnant, and diagnosed with an OUD

Metric	Dual Eligible	Pregnant	OUD
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	2.0	6.4	-0.45
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	-0.67	7.4	-0.97
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	-5.2*	-4.7	-4.5
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	-3.3	-0.49	-6.2*
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	-1.1*	-0.44	-8.9*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	-0.43*	-0.11	-3.1*
Supportive Housing Services- Access & Utilization (n)	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-
Peer-Delivered Services (n)	-	-	-

Results stratified by sex

Results for Medicaid members classified as women and men again reflect overall results closely (Exhibit 25). The two measures for follow-up after ED visits for mental illness declined slightly to moderately in these group. By contrast, ED utilization for SUD and inpatient stays for SUD both strongly improved for them.

Exhibit 25. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, by sex

Metric	Female	Male
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	0.54	0.36
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	1.2	-0.26
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	-4.2*	-4.6*
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	-3.7*	-6.4*
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	-0.77*	-1.5*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	-0.16*	-0.25*
Supportive Housing Services- Access & Utilization (n)	-	-
Supportive Employment Services- Access & Utilization (n)	-	-
Peer-Delivered Services (n)	-	-

Results stratified by race and ethnicity

All racial and ethnic groups experienced moderate to large improvements in ED utilization and inpatient stays (Exhibit 26).

Results for the two measures of follow-up after ED visits for mental illness were also broadly similar to changes for the full population. Specifically, Medicaid members classified as Hispanic or Latine and other race exhibited moderate declines in these measures, Medicaid members classified as white exhibited small declines in these measures, and 30-days follow-up after ED visit for mental illness declined moderately among Medicaid members classified as Black. Other changes were not statistically significant.

Exhibit 26. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, by race and ethnicity

Metric	Black	Hispanic/ Latine	White	Other Race
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	0.65	0.22	0.77	2.0
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	0.93	-2.7	0.69	4.0
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	-4.5	-6.5	-4.1*	-10.3*
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	-7.3	-10.4*	-4.8*	-8.4*
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	-2.1*	-0.44*	-1.2*	-0.93*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	-0.36*	-0.06*	-0.24*	-0.10*
Supportive Housing Services- Access & Utilization (n)	-	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-	-
Peer-Delivered Services (n)	-	-	-	-

Results stratified by geographic areas

ED utilization and inpatient stays declined strongly among Medicaid members living in all three geographic areas (Exhibit 27). Changes for 7-day and 30-day follow-up after ED visits for mental illness were only significant for Medicaid members residing in urban areas, with changes being small to moderate.

Exhibit 27. Levels and adjusted changes for claims-based measures related to emergency department and inpatient hospital utilization, by geographical areas

Metric	Isolated	Rural	Urban
17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days) (%)	0.50	-0.60	0.66
17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days) (%)	1.7	0.09	0.31
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days) (%)	-3.7	-0.28	-5.3*
17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days) (%)	-4.1	-2.2	-5.7*
23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries	-0.85*	-0.75*	-1.2*
24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries	-0.14*	-0.14*	-0.22*
Supportive Housing Services- Access & Utilization (n)	-	-	-
Supportive Employment Services- Access & Utilization (n)	-	-	-
Peer-Delivered Services (n)	-	-	-

Hypothesis 4: The demonstration will provide a continuum of care

We first present findings for the full population and then stratified by subgroups.

Results for the full population

Of the three claims-based measures related to hypothesis 4, one moved in the desired direction and two did not (Exhibit 28). Specifically, readmissions among beneficiaries with SUD declined from 18.2 percent to 16.2 (adjusted change: -2.2 percent), an improvement. The two measures getting worse were early intervention (adjusted change: -0.02 per 1,000 PMPM) and continuity of pharmacotherapy for OUD (adjusted change: -4.4 per 1,000 PMPM). These two measures were also included in hypothesis 1.

Six non-claims measures that were part of the first three hypotheses were included in this hypothesis. Of these, four -- the number of available SUD providers and the number of Medicaid members receiving supportive housing, supportive employment and peer-delivered services – increased, whereas the number of SUD IMDs providing SUD treatment and the number of SUD beds in IMDs declined (Exhibit 29).

Exhibit 28. Levels and adjusted changes for claims-based measures related to a continuum of care, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
07. Early Intervention (1,000 PMPM)	0.02	0.01	-0.02*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	21.6	17.0	-4.4*
25. Readmissions Among Beneficiaries with SUD (%)	18.2	16.2	-2.2*

Exhibit 29. Levels and adjusted changes for non-claims measures related to a continuum of care, full study population

Metric	2021	2022	2023	Change
13. Provider Availability (n)	15411	-	18240	2829
SUD IMDs Providing Treatment for SUD (n)	36	-	27	-9
Beds in SUD IMDs Providing Treatment for SUD (n)	1344	-	1251	-93
Supportive Housing Services- Access & Utilization (n)	-	15	56	41
Supportive Employment Services- Access & Utilization (n)	-	91	432	341
Peer-Delivered Services (n)	8040	-	11664	3624

Results stratified by age groups

Results for Medicaid members 18-64 years old were again very similar to those of the full population, with all three claims-based measures declining (Exhibit 30). The decline in early intervention was large (adjusted change: -0.03 per 1,000 PMPM).

Among those ages 65 and older, continuity of pharmacotherapy for OUD declined, and so did readmissions. The change in early intervention was not statistically significant.

Results were either not statistically significant or suppressed due to a small sample size for Medicaid members less than 18 years old.

Exhibit 30. Levels and adjusted changes for claims-based measures related to a continuum of care, by age groups

Metric	<18 yrs	18-64 yrs	65+ yrs
07. Early Intervention (1,000 PMPM)	0.00	-0.03*	-
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-	-4.5*	-3.6*
25. Readmissions Among Beneficiaries with SUD (%)	-0.80	-2.1*	-3.2*
SUD IMDs Providing Treatment for SUD (n)	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-

Results stratified by dual eligibility, pregnancy, and OUD diagnosis

Early intervention declined moderately for pregnant Medicaid members and Medicaid members diagnosed with an OUD. The change was not statistically significant for dually eligible Medicaid members (Exhibit 31).

Continuity of pharmacotherapy for OUD declined moderately for all three groups.

Only dually eligible Medicaid members experienced a statistically significant decline in readmissions, which was large (adjusted change: -5.5 percent).

Exhibit 31. Levels and adjusted changes for claims-based measures related to a continuum of care, by Medicaid members who are dually eligible, pregnant, and diagnosed with an OUD

Metric	Dual Eligible	Pregnant	OUD
07. Early Intervention (1,000 PMPM)	0.00	-0.03*	-0.15*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-3.1*	-4.3*	-4.4*
25. Readmissions Among Beneficiaries with SUD (%)	-5.5*	-1.3	-1.7
SUD IMDs Providing Treatment for SUD (n)	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-

Results stratified by sex

Results stratified by sex were similar to findings for the full study population, with changes being slightly smaller in magnitude for members classified as women than for those classified as men (Exhibit 32). For instance, continuity of pharmacotherapy for OUD declined moderately for Medicaid members classified as women (adjusted change: -3.5 percent), but strongly for Medicaid members classified as men (adjusted change: -5.4 percent). Similarly, the change in readmissions was not statistically significant for Medicaid

members classified as women, but the measure declined moderately for Medicaid members classified as men (-2.9 percent).

Exhibit 32. Levels and adjusted changes for claims-based measures related to a continuum of care, by sex

Metric	Female	Male
07. Early Intervention (1,000 PMPM)	-0.01*	-0.02*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-3.5*	-5.4*
25. Readmissions Among Beneficiaries with SUD (%)	-1.3	-2.9*
SUD IMDs Providing Treatment for SUD (n)	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-

Results stratified by race and ethnicity

Changes by race and ethnicity were similar to changes for the full population, with a few exceptions (Exhibit 32). Specifically, measures declined for all groups, with the exception for early intervention for Medicaid members classified as Black (results suppressed due to a small sample size), continuity of pharmacotherapy for OUD and Medicaid members classified as Hispanic or Latine (change not statistically significant), and readmissions for Medicaid members classified as Black (change not statistically significant).

Exhibit 32. Levels and adjusted changes for claims-based measures related to a continuum of care, by race and ethnicity

Metric	Black	Hispanic/ Latine	White	Other Race
07. Early Intervention (1,000 PMPM)	-	-0.01*	-0.01*	-0.02*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-6.3*	-1.9	-5.3*	-5.9*
25. Readmissions Among Beneficiaries with SUD (%)	-4.0	-4.2	-2.9*	-4.2
SUD IMDs Providing Treatment for SUD (n)	-	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-	-

Results stratified by geographic areas

Medicaid members living in rural and urban areas both experienced large declines in early intervention (adjusted change: -0.02 per 1,000 PMPM and -0.01 per 1,000 PMPM, respectively), moderate declines in continuity of pharmacotherapy for OUD, and moderate declines in readmissions (Exhibit 34).

For those living in isolated areas, only a decline in continuity of pharmacotherapy for OUD was statistically significant, with the change being large (adjusted change: -6.8 percent).

Exhibit 34. Levels and adjusted changes for claims-based measures related to a continuum of care, by geographic areas

Metric	Isolated	Rural	Urban
07. Early Intervention (1,000 PMPM)	-0.01	-0.02*	-0.01*
22. Continuity of Pharmacotherapy for Opioid Use Disorder (%)	-6.8*	-4.8*	-4.3*
25. Readmissions Among Beneficiaries with SUD (%)	-1.8	-1.9	-2.3*
SUD IMDs Providing Treatment for SUD (n)	-	-	-
Beds in SUD IMDs Providing Treatment for SUD (n)	-	-	-

Hypothesis 5: The demonstration will reduce overdose deaths

We present findings first for the full population and then stratified by subgroups.

Results for the full population

The two claims-based measures for the fifth hypothesis both improved (Exhibit 35). Specifically, use of opioids at high dosage in persons without cancer declined from 5.1 percent to 3.7 percent (adjusted change: -1.6 percent), and concurrent use of opioids and benzodiazepines declined from 10.7 to 7.7 percent (adjusted change: -3.1 percent).

Exhibit 35. Levels and adjusted changes for claims-based measures related to overdose deaths, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	5.1	3.7	-1.6*
21. Concurrent Use of Opioids and Benzodiazepines (%)	10.7	7.7	-3.1*

The two non-claims measures included in this hypothesis, the number and rate of overdose deaths due to any opioid, increased moderately (Exhibit 36). Specifically, the number of opioid-related overdose deaths increased from 1,224 during the period April 2021 - March 2022 to 1,446 one year later, and the rate of

opioid-related overdose deaths increased from 28.7 per 100,000 to 33.9 per 100,000 during the same period.

Exhibit 5.36. Levels and adjusted changes for non-claims measures related to overdose deaths, full study population

Metric	2021	2022	2023	Change
26. Overdose Deaths (n)	1224	1446	-	222
27. Overdose Deaths (rate)	28.7	33.9	-	5.2

Results stratified by age groups

Both Medicaid members 18-64 years old and Medicaid members 65 years and older experienced strong declines in the use of opioids at high dosage in persons without cancer and concurrent use of opioids and benzodiazepines (Exhibit 37). Results were not reported for those younger than 18 years of age due to a small sample size.

Exhibit 37. Levels and adjusted changes for claims-based measures related to overdose deaths, by age groups

Metric	<18 yrs	18-64 yrs	65+ yrs
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	-	-1.5*	-2.0*
21. Concurrent Use of Opioids and Benzodiazepines (%)	-	-2.7*	-4.6*
26. Overdose Deaths (n)	-	-	-
27. Overdose Deaths (rate)	-	-	-

Results stratified by dual eligibility, pregnancy, and OUD diagnosis

Use of opioids at high dosage in persons without cancer declined moderately to strongly among dually eligible Medicaid members, pregnant Medicaid members, and Medicaid members with an OUD (Exhibit 38).

The concurrent use of opioids and benzodiazepines also declined moderately to strongly among dually eligible Medicaid members and Medicaid members diagnosed with an OUD. Changes for pregnant Medicaid members were not statistically significant.

Exhibit 38. Levels and adjusted changes for claims-based measures related to overdose deaths, by Medicaid members who are dually eligible, pregnant, and diagnosed with an OUD

Metric	Dual Eligible	Pregnant	OUD
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	-2.5*	-1.2*	-2.1*
21. Concurrent Use of Opioids and Benzodiazepines (%)	-5.4*	-0.38	-3.3*
26. Overdose Deaths (n)	-	-	-
27. Overdose Deaths (rate)	-	-	-

Results stratified by sex

Results were similar when stratifying by sex (Exhibit 39). Both groups experienced strong declines in the use of opioids at high dosage in persons without cancer and concurrent use of opioids and benzodiazepines.

Exhibit 39. Levels and adjusted changes for measures related to overdose deaths, by sex

Metric	Female	Male
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	-1.5*	-1.8*
21. Concurrent Use of Opioids and Benzodiazepines (%)	-3.3*	-2.6*
26. Overdose Deaths (n)	-	-
27. Overdose Deaths (rate)	-	-

Results stratified by race and ethnicity

Most race and ethnicity groups experienced strong and statistically significant declines in use of opioids at high dosage in persons without cancer, with only the change for Medicaid members classified as Black being not statistically significant (Exhibit 40).

The concurrent use of opioids and benzodiazepines declined strongly among all race and ethnicity groups.

Exhibit 40. Levels and adjusted changes for claims-based measures related to overdose deaths, by race and ethnicity

Metric	Black	Hispanic/ Latine	White	Other Race
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	-1.1	-2.1*	-1.9*	-2.2*
21. Concurrent Use of Opioids and Benzodiazepines (%)	-1.8*	-2.6*	-4.1*	-2.4*
26. Overdose Deaths (n)	-	-	-	-
27. Overdose Deaths (rate)	-	-	-	-

Results stratified by geographic areas

Medicaid members residing in isolated, rural and urban areas all experienced strong and statistically significant declines in the use of opioids at high dosage in persons without cancer and concurrent use of opioids and benzodiazepines (Exhibit 41).

Exhibit 41. Levels and adjusted changes for claims-based measures related to overdose deaths, by geographic areas

Metric	Isolated	Rural	Urban
18. Use of Opioids at High Dosage in Persons Without Cancer (%)	-2.6*	-1.6*	-1.5*
21. Concurrent Use of Opioids and Benzodiazepines (%)	-4.5*	-4.1*	-2.7*
26. Overdose Deaths (n)	-	-	-
27. Overdose Deaths (rate)	-	-	-

Assessment of changes in spending

We first present findings for the full population and then stratified by subgroups.

Results for the full population

Total spending declined strongly from $638.30 PMPM during the pre-period to $519.46 during the post-period, for an adjusted change of -$160.31 (Exhibit 42).

Spending declined for all cost categories as well. Reductions were moderate for ED spending (adjusted change: -$5.74 PMPM), prescription drug spending (adjusted change: -$11.90 PMPM), behavioral health spending (adjusted change: -$25.01 PMPM), and non-SUD spending (adjusted change: -$82.15).

Reductions were large for other outpatient spending (adjusted change: -$75.79 PMPM), inpatient spending (-$47.55 PMPM), SUD IMD spending (-$1.96 PMPM), and non-SUD IMD spending (-$5.01 PMPM).

Exhibit 42. Levels and adjusted changes for claims-based expenditure measures, full study population

Metric	Pre-Period 2017-2019	Post-Period 2022	Adjusted Change
ED Spending (PMPM) ($)	$ 25.42	$ 20.59	-$ 5.74*
Other Outpatient Spending (PMPM) ($)	$284.58	$229.20	-$ 75.79*
Inpatient Spending (PMPM) ($)	$148.07	$108.79	-$ 47.55*
Prescription Drug Spending (PMPM) ($)	$ 91.35	$ 86.60	-$ 11.90*
Behavioral Health Spending (PMPM) ($)	$102.24	$ 84.05	-$ 25.01*
Total Spending (PMPM) ($)	$638.30	$519.46	-$160.31*
SUD IMD Spending (PMPM) ($)	$ 5.59	$ 4.10	-$ 1.96*
Non-SUD IMD Spending (PMPM) ($)	$ 16.14	$ 12.56	-$ 5.01*
Non-SUD Spending (PMPM) ($)	$406.19	$349.98	-$ 82.15*

Results stratified by age groups

Most spending categories declined across age groups, with minor exceptions (Exhibit 43). Notably, prescription drug spending declined for Medicaid members 18-64 years old, but increased moderately for Medicaid members older than 65 years (adjusted change: $29.56). The change for this measure was not statistically significant among Medicaid members younger than 18 years.

Among Medicaid members older than 65 years, changes for three measures (SUD IMD spending, non-SUD IMD spending, and non-SUD spending) were also not statistically significant.

Exhibit 5.43. Levels and adjusted changes for claims-based expenditure measures, by age groups

Metric	<18 yrs	18-64 yrs	65+ yrs
ED Spending (PMPM) ($)	-$ 1.49*	-$ 6.72*	-$ 38.09*
Other Outpatient Spending (PMPM) ($)	-$ 16.80*	-$ 85.30*	-$362.98*
Inpatient Spending (PMPM) ($)	-$ 4.71*	-$ 54.81*	-$634.28*
Prescription Drug Spending (PMPM) ($)	-$0.08	-$ 20.76*	$29.56*
Behavioral Health Spending (PMPM) ($)	-$ 5.23*	-$ 34.42*	-$ 61.75*
Total Spending (PMPM) ($)	-$ 28.30*	-$195.09*	-$631.82*
SUD IMD Spending (PMPM) ($)	-$0.31*	-$ 2.98*	-$0.00
Non-SUD IMD Spending (PMPM) ($)	-$0.55*	-$ 7.74*	$0.56
Non-SUD Spending (PMPM) ($)	-$ 27.20*	-$114.35*	$78.80

Results stratified by dual eligibility, pregnancy, and OUD diagnosis

Spending declined for most measures among dually eligible Medicaid members, with one exception: prescription drug spending increased moderately for this group (adjusted change: $54.52; Exhibit 44). Results for three measures (SUD IMD spending, non-SUD IMD spending, and non-SUD spending) were suppressed due to a small sample size.

Changes for pregnant Medicaid members OUD were fairly muted. Total spending, inpatient spending, behavioral health spending, and non-SUD spending all declined moderately, and ED spending as well as other outpatient spending only declined slightly. Changes for two measures were large: SUD IMD spending (-$3.10 PMPM) and non-SUD IMD spending (-$8.23 PMPM). The change in prescription drug spending was not statistically significant.

Medicaid members with an OUD diagnosis exhibited similar spending reductions as the full study population. Specifically, changes in total spending as well as other outpatient spending, inpatient spending and non-SUD spending were strong, and changes in other spending measures were moderate.

Exhibit 44. Levels and adjusted changes for claims-based expenditure measures, by Medicaid members who are dually eligible, pregnant, and diagnosed with an OUD

Metric	Dual Eligible	Pregnant	OUD
ED Spending (PMPM) ($)	-$ 31.17*	-$ 2.78*	-$ 17.23*
Other Outpatient Spending (PMPM) ($)	-$316.69*	-$ 16.78*	-$279.41*
Inpatient Spending (PMPM) ($)	-$498.96*	-$ 93.94*	-$160.05*
Prescription Drug Spending (PMPM) ($)	$54.52*	$0.30	-$ 66.50*
Behavioral Health Spending (PMPM) ($)	-$ 93.74*	-$ 10.10*	-$148.11*
Total Spending (PMPM) ($)	-$574.57*	-$123.29*	-$660.43*
SUD IMD Spending (PMPM) ($)	-	-$ 3.10*	-$ 24.71*
Non-SUD IMD Spending (PMPM) ($)	-	-$ 8.23*	-$ 47.66*
Non-SUD Spending (PMPM) ($)	-	-$111.96*	-$389.13*

Results stratified by sex

Total spending and spending for all categories declined for both Medicaid members classified as female and male, with declines being more pronounced for the latter group (Exhibit 45). For instance, total spending declined strongly for Medicaid members classified as male (adjusted change: -$171.47), compared to a moderate decline for Medicaid members classified as female (adjusted change: -$150.13).

For Medicaid members classified as male, large declines relative to pre-period levels also existed for all spending categories, except ED spending, prescription drug spending and non-SUD spending. By contrast, spending declines by categories were mostly moderate for Medicaid members classified as female.

Exhibit 45. Levels and adjusted changes for claims-based expenditure measures, by sex

Metric	Female	Male
ED Spending (PMPM) ($)	-$ 5.97*	-$ 5.41*
Other Outpatient Spending (PMPM) ($)	-$ 71.48*	-$ 80.34*
Inpatient Spending (PMPM) ($)	-$ 50.68*	-$ 44.03*
Prescription Drug Spending (PMPM) ($)	-$ 7.96*	-$ 16.40*
Behavioral Health Spending (PMPM) ($)	-$ 18.73*	-$ 32.09*
Total Spending (PMPM) ($)	-$150.13*	-$171.47*
SUD IMD Spending (PMPM) ($)	-$ 1.56*	-$ 2.43*
Non-SUD IMD Spending (PMPM) ($)	-$ 4.56*	-$ 5.62*
Non-SUD Spending (PMPM) ($)	-$ 76.86*	-$ 87.11*

Results stratified by race and ethnicity

Total spending and spending across categories declined strongly for Medicaid members classified as Black (Exhibit 46). The change in total spending was the largest across all race and ethnicity groups (adjusted change: -$462.44).

Total spending and most spending categories also declined strongly for Medicaid members classified as Hispanic or Latine, with only a few exceptions. Specifically, ED spending declined slightly among Medicaid members classified as Hispanic or Latine, and non-SUD IMD spending as well as non-SUD spending declined moderately for this group. Changes in SUD IMD spending were also not statistically significant.

Total spending, other outpatient spending, and inpatient spending declined strongly for Medicaid members classified as White. Changes in other measures were moderate.

Among Medicaid members classified as other race, total spending declined moderately (adjusted change: -$97.79), and so did ED spending, and other outpatient spending, and SUD IMD spending. Inpatient and behavioral health spending declined strongly. Notably, prescription drug spending increased slightly for this group (adjusted change: $13.19).

Exhibit 46. Levels and adjusted changes for claims-based expenditure measures, by race and ethnicity

Metric	Black	Hispanic/ Latine	White	Other Race
ED Spending (PMPM) ($)	-$ 13.01*	-$ 1.37*	-$ 7.75*	-$ 2.72*
Other Outpatient Spending (PMPM) ($)	-$280.66*	-$ 88.20*	-$107.45*	-$ 58.51*
Inpatient Spending (PMPM) ($)	-$ 88.46*	-$ 27.94*	-$ 67.20*	-$ 35.63*
Prescription Drug Spending (PMPM) ($)	-$ 46.88*	-$ 13.68*	-$ 23.99*	$13.19*
Behavioral Health Spending (PMPM) ($)	-$ 50.15*	-$ 16.31*	-$ 35.50*	-$ 26.41*
Total Spending (PMPM) ($)	-$462.44*	-$141.06*	-$234.61*	-$ 97.79*
SUD IMD Spending (PMPM) ($)	-$ 2.85*	-$0.12	-$ 1.43*	-$0.67
Non-SUD IMD Spending (PMPM) ($)	-$ 7.00*	-$ 1.23*	-$ 3.37*	-$ 10.60*
Non-SUD Spending (PMPM) ($)	-$208.13*	-$ 45.23*	-$120.87*	-$ 26.68*

Results stratified by geographic areas

Total spending declined moderately to strongly for Medicaid members living in isolated, rural, and urban areas (Exhibit 47). Spending also declined for most categories across the three geographic areas, with just one exception: the change in prescription drug spending among Medicaid members residing in isolated areas was not statistically significant.

Exhibit 47. Levels and adjusted changes for claims-based expenditure measures, by geographic areas

Metric	Isolated	Rural	Urban
ED Spending (PMPM) ($)	-$ 4.58*	-$ 4.67*	-$ 6.07*
Other Outpatient Spending (PMPM) ($)	-$ 76.05*	-$ 69.96*	-$ 77.27*
Inpatient Spending (PMPM) ($)	-$ 49.24*	-$ 50.19*	-$ 46.45*
Prescription Drug Spending (PMPM) ($)	$ 7.76	-$ 4.83*	-$ 14.62*
Behavioral Health Spending (PMPM) ($)	-$ 23.97*	-$ 22.68*	-$ 25.63*
Total Spending (PMPM) ($)	-$143.81*	-$150.13*	-$163.44*
SUD IMD Spending (PMPM) ($)	-$ 1.26*	-$0.90*	-$ 2.29*
Non-SUD IMD Spending (PMPM) ($)	-$ 10.27*	-$ 4.03*	-$ 5.01*
Non-SUD Spending (PMPM) ($)	-$ 66.61*	-$ 68.42*	-$ 86.23*

Conclusions

Oregon's SUD waiver was effective on April 8, 2021. In this interim report, we examined changes in 29 claims-based measures from the period four to two years before waiver implementation (2017 to 2019) to 2022, the first full year following waiver implementation. We also reported changes in nine non-claims measures during the first three years of waiver implementation. Overall, we found limited support for the five hypotheses. Specifically:

- **Hypothesis 1: Increase referrals and engagement in OUD and other SUD treatment.** Only two of the 11 claims-based measures included in this hypothesis improved, namely initiation and engagement of treatment for opioid abuse or dependence. The other nine measures moved in the opposite direction. Four non-claims measures were included in this hypothesis, with two improving (number of available SUD providers and number of available MAT SUD providers) and two getting worse (number of SUD IMDs providing SUD treatment, number of SUD beds in IMDs). Four non-claims measures were included in this hypothesis, with two improving (number of available SUD providers and number of available MAT SUD providers) and two getting worse (number of SUD IMDs providing SUD treatment, number of SUD beds in IMDs).

- **Hypothesis 2: Increase treatment adherence.** Eight claims-based measures were included in this hypothesis. Of these, one moved in the desired direction (medication-assisted treatment) and six moved in the opposite direction. One measure, average length of stay in IMDs, declined, with the change not being classified as an improvement or worsening. Results were more positive for the three non-claims measures included in this hypothesis: the number of Medicaid members receiving supportive housing, supportive employment and peer-delivered services all increased strongly during the early waiver period. However, numbers for supportive housing and employment were fairly low as of early 2023.

- **Hypothesis 3: Decrease ED and inpatient visits.** Results for claims-based measures were somewhat more positive for this hypothesis compared to the first two. Specifically, two of the six claims-based measures improved strongly (ED utilization for SUD and inpatient stays for SUD), whereas two declined slightly, and two did not change significantly. Moreover, the three non-claims measures for this hypothesis, which were the same as the ones for the second hypothesis (supportive housing, supportive employment, peer-delivered services), also improved.

- **Hypothesis 4: Increase rates of successful recovery.** One claims-based measure included in this hypothesis improved moderately (readmissions among beneficiaries with SUD), but the other two claims-based measures got worse. Six non-claims measures that were part of the first three hypotheses were included in this hypothesis. Of these, four improved (the number of available SUD providers and the number of Medicaid members receiving supportive housing, supportive employment and peer-delivered services), but two got worse (the number of SUD IMDs providing SUD treatment and the number of SUD beds in IMDs).

- **Hypothesis 5: Decrease opioid overdose death rate.** The two claims-based measures included in this hypothesis -- use of opioids at a high dosage in persons without cancer and concurrent use of

opioids and benzodiazepines -- declined moderately, which was an improvement. However, counts and rates of overdoses increased during the early waiver period.

We also assessed changes in Medicaid spending. Total spending declined moderately to strongly, and so did other spending categories.

Results for subpopulations were generally fairly similar to the full population, with no population group having clearly better or worse changes across hypotheses. Notably differences in results were:

- **Any SUD treatment (Hypothesis 1)** declined among the full population, but improved among Medicaid members 65 years and older, dually eligible Medicaid members, and Medicaid members with an OUD diagnosis.

- **Medication-assisted treatment (Hypothesis 2)** increased for the full population but declined among Medicaid members classified as Black.

- **Prescription drug spending (spending assessment)** declined moderately for the full population but increased among Medicaid members 65 years and older, dually eligible Medicaid members, and Medicaid members classified as other race.

Interpretations, Policy Implications and Interactions with Other State Initiatives

In this section, we offer interpretations of findings, drawing from studies or other evaluations when possible. Policy recommendations are included as recommendations in the following section. Interactions with other states initiatives were not relevant for this interim report because it only used data from Oregon.

Comparing changes in the interim report to changes in the Mid-Point Assessment helps distinguish independent trends from COVID-19 effects

The main difficulty in interpreting findings from the interim report is that changes may be confounded due to the COVID-19 public health emergency (PHE). Ideally, we would compare trends in Oregon to trends in other states to be able to distinguish between changes due to the waiver versus COVID-19 related changes. However, such a multi-state analyses was beyond the scope of the interim report.

Instead, we used findings from the Mid-Point Assessment (MPA) to gain a better idea of which changes may have been primarily affected by the COVID-19 pandemic. The MPA assessed changes between 2021 and 2022, and it used most of the claims-based measures included in the interim report (except access to preventive or ambulatory health services for adult Medicaid beneficiaries with SUD, inpatient SUD admissions, and all spending metrics). The MPA used a narrower study population (Medicaid-only enrollees instead of all Medicaid enrollees, including those dually eligible for Medicaid and Medicaid), but interim results for the full population were very similar to those for the Medicaid-only population. Thus, it is instructive to compare changes between 2017-2019 and 2022 (as done for the interim report) to changes between 2021 and 2022 (as done for the MPA) to gauge which changes were affected by the COVID-19 pandemic (i.e., between 2017-2019 and 2020), but reversed 2021-2022, and which changes were similar for both comparison periods. Using this approach, four categories can be distinguished:

1. **Measures for which changes in the MPA were more positive than changes in the interim report.** For these measures, negative changes in the interim report were likely due to COVID-19, because of improvements after the initial COVID-19 period. Measures in this category included early intervention, initiation and engagement of treatment for alcohol abuse or dependence, initiation and engagement of treatment for total AOD abuse or dependence, intensive outpatient and partial hospitalization services, residential and inpatient services, withdrawal management, and SUD treatment in an IMD.

2. **Measures for which changes were positive in both the MPA and interim report.** Concordance of positive changes indicated improvements that either started before the COVID pandemic and then continued 2021-20222, or that primarily occurred after 2022. Measures in this category

included ED utilization for SUD, use of opioids at high dosage in persons without cancer, concurrent use of opioids and benzodiazepines, and readmissions.

3. **Measures for which changes were negative in both the MPA and interim report.** Concordance of negative changes suggested that factors other than the COVID-19 PHE affected these changes. Measures in this group included initiation and engagement of treatment for other drug abuse or dependence, continuity of pharmacotherapy for OUD, outpatient services, follow-up after emergency department visit for mental illness, and follow-up after emergency department visit for alcohol and other drug abuse or dependence.

4. **Measures for which changes were worse in the MPA than in the interim report.** This pattern suggested that any improvements made by 2021 were not further sustained. One measure, medication-assisted treatment, falls into this category: it improved between 2017-2019 and 2022, but remained unchanged between 2021 and 2022.

Overall, this comparison offers a more nuanced interpretation of our findings. Most notably, it is somewhat reassuring that a large number of measures with negative changes found in this interim report (spanning 2017-2022) appeared to have improved from 2021-2022, suggesting a turn-around from the COVID-19 PHE. However, measures with negative changes in both comparisons should receive particular attention, because negative changes did not seem to be only, or primarily, due to the COVID-19 PHE. Finally, the comparison for medication-assisted treatment suggests that more effort is required to further improve this measure. We will discuss more detailed policy recommendations based on this interpretation of findings in the next section.

Supportive housing and employment grow, but numbers remain small

Increases in supportive housing and supportive employment found in 2022 were encouraging, but the scale of these services remained small, especially for supportive housing. As a comparison, Washington's 1115 Medicaid waiver implemented these services in January 2018, and according to the waiver's interim report, approximately 6,000 Medicaid members were enrolled in either or both programs two years later. Eligibility was based on risk- and needs-based criteria, some but not all related to SUD; demographic characteristics for a sample of enrollees suggested that approximately one-quarter of participants, or 1,500 individuals, had an SUD diagnosis. Oregon's Medicaid enrollment was about three-quarters the enrollment in Washington as of August 2024;[12] thus, a comparable enrollment number for Oregon would be approximately 1,125 members. In 2023-2024, only 56 members of Oregon Medicaid used supportive housing services and 432 used supportive employment services, for a total of 488 members (assuming none received both services). Thus, enrollment in Oregon appeared to lag Washington's two years after Oregon's program start.

Residential SUD service use declines, but what does it mean?

The rate of Oregon Medicaid members receiving SUD treatment in an IMD declined between 2017-2019 and 2022. Moreover, the number of SUD IMDs providing treatment for SUD and the number of SUD beds in IMDs declined between 2021 and 2023. These developments were at odds with the waiver's goal to

increase access to residential care by removing the IMD exclusion. However, the MPA indicated that rate of Medicaid members receiving SUD treatment was stable from 2021 to 2022, suggesting that the COVID-19 pandemic contributed at least to some of the decline in access.

The average length of stay in IMDs also declined. The interpretation of this measure was ambiguous: the change could reflect a more efficient use of residential treatment services, or it could indicate that some Medicaid members could not stay in residential treatment.

Spending decline sends ambiguous signals about SUD treatment access

This interim report also included a spending assessment. Total spending, as well as spending for all categories, declined between 2017-2019 and 2022. Declines were classified as a positive change; however, some caution should be exerted when interpreting them. First, while changes for high-intensive spending categories (ED spending, inpatient spending) were likely desirably -- they plausibly reflected reductions in ED utilization for SUD and inpatient stays for SUD -- changes in other spending categories may in some cases reflect somewhat problematic changes. For instance, the decline in other outpatient spending may at least partially be due to a decline in outpatient services, which was not a desired development. Similarly, reductions in SUD IMD spending likely reflected a decrease in access to, and length of stay of, SUD treatment in IMDs. Finally, a strong decline in prescription drug spending for Medicaid members classified as Black could partially be related to the decrease in medication-assisted treatment for this population group.

Increase in peer-delivered services suggests advances in integrating this newer workforce

The number of peer-delivered services increased substantially from approximately 8,000 in 2021/2022 to more than 11,500 in 2023/2024. This positive development suggests that OHA has been successful in strengthening the state's recovery support system, which was one of the primary goals of the waiver. Qualitative results in the MPA supported this finding; interview participants highlighted increased availability and contributions of peer support workers in their organizations. Increased service volume may also reflect clarification of Medicaid billing practices for peer services, an administrative area that was cited as a challenge by providers in the MPA.

Changes in opioid-related overdose deaths measures

Two claims-based measures related to opioid-related overdose deaths improved, but the number and rate of opioid-related overdose deaths increased during the early waiver period. Research suggests that the increase opioid-related overdose deaths may be attributable to the proliferation of fentanyl in recent years. Interview participants for the MPA underscored the devastating effects of the influx of fentantyl in Oregon, including increased use, more difficult detox periods, and more overdoses.

Lessons Learned and Other Recommendations

We conclude this report by offering some lessons learned and recommendations.

Lessons learned

- **More work needs to be done to create a full continuum of SUD care.** While there were positive developments towards a full continuum of SUD care, most notably the increase in peer-delivered services, launch of supportive housing and employment services, and increase in medication-assisted treatment, a number of claims-based measures related to this goal moved in the wrong direction. Specifically, early intervention, access to residential care in IMDs, withdrawal management, access to preventive ambulatory health services, and follow-up after ED visit for mental illness all declined.

- **There were positive developments related to the use of high-intensive care.** Both ED utilization for SUD and inpatient stays for SUD declined. Moreover, readmissions declined as well.

- **The COVID-19 pandemic appears to have had a major effect on a number of measures.** As noted above, a number of measures got worse for the evaluation period of this report, but improved between 2021 and 2022, suggesting a rebound following the COVID-19 pandemic. While the pre-post design of this analysis cannot control for system-wide for negative changes in outcomes that likely occurred due to the pandemic, we plan to leverage national Medicaid data to distinguish between COVID-related changes that affected all states, and waiver-related changes in Oregon.

- **Claims-based measures for hypothesis 5 did only capture a narrow part of factors influencing opioid-related deaths.** Hypothesis 5 only included two claims-based measures, use of opioids at high dosage in persons without cancer and concurrent use of opioids and benzodiazepines. While these measures reflected important aspects of medically (in-)appropriate care and improved strongly, they seemed to be very narrow and specific, as indicated by the increase in opioid-related deaths.

Recommendations

- **Investigate lack of improvement in measures of follow-up after ED visits, and explore strategies to reverse these trends.** Follow-up after ED visits is an important part of ensuring access across the full continuum of care. Negative trends for follow-up after ED visit for mental illness existed both in the interim report and in the MPA, suggesting that lower levels might persist beyond 2022. Possible steps to improve follow-up after ED visits could involve identifying ED providers with low follow-up rates and then working with these organizations to identify strategies to improve care coordination. Additionally, OHA should assess how many Medicaid members with SUD have case managers who can

help them navigate the healthcare system. Case management services was expanded to all individuals with SUD as part of the waiver, but not all Medicaid members with SUD may be aware of this benefits. If necessary, OHA could also reach out to case managers to make sure that they are aware of the importance of follow-up care after ED visits of their clients.

- **Assess reasons for declines in the rate of residential treatment in IMDs, the number of SUD IMDs and the number of SUD beds in IMDs.** Increasing access to residential treatment was an important goal of Oregon's SUD waiver, and declines in IMD-related measures suggested that the state has moved in the wrong direction. A first step could be to reach out to IMDs to understand the observed decline in the supply of facilities and beds. OHA should also continue working with Oregon's Governor Kotek and reach out to state legislators to increase funding for residential bed capacity. Governor Kotek's 2025-2027 budget proposes to use $90 million in funds to increase treatment beds, but the budget has competing priorities for transportation, education, housing and other social services.[13]

- **Continue efforts to increase OUD medication treatment, and address the decline in rates of OUD pharmacotherapy continuation.** Medication-assisted treatment improved from 2017-2019 to 2022, but remained stabled between 2021 and 2022. Moreover, rates of continuation for OUD pharmacotherapy declined. Possible strategies to further increase rates and continuity of OUD medication treatment could include: outreach to primary care providers to increase their willingness to prescribe buprenorphine; outreach to opioid treatment programs (OTPs) to increase acceptance of the use of take-home methadone for stable patients; a review of CCO's contracts to ensure that it is in their best interest to increase OUD medication treatment and keep patients on OUD pharmacotherapy; and an assessment of factors that may contribute to disruptions in OUD medication treatment.

- **Monitor and address the fentanyl crisis.** We observed an increase in opioid-related deaths, consistent with the most recent statistics from CDC, which showed that the overall number of these deaths declined but increased in Oregon. This development is very alarming, and fentanyl is likely a major factor for it. OHA should closely monitor fentanyl-related deaths, and continue distribution efforts of naloxone, which can reverse overdoses.

- **Consider efforts to increase enrollment in supportive housing and employment.** While enrollment for both services increased, levels were low as of 2023, especially for supportive housing. OHA could review whether there is sufficient capacity for more services, and if that is the case, increase outreach and information efforts to increase awareness of, and enrollment in, these services.

- **Monitor outcomes that did not improve in this interim report, but improved in the MPA.** As described above, this pattern suggested a reversal of trends, however, measures still did not move in the desired direction from the pre-COVID period to 2022. Continued monitoring of these measures will further clarify whether promising trends for the period 2021-2022 will continue throughout the waiver period, or whether some of these outcomes require further attention.

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Attachments

Measure definitions

3. Medicaid Beneficiaries with SUD Diagnosis (monthly)

Description: Number of beneficiaries who receive MAT or a SUD-related treatment service with an associated SUD diagnosis during the measurement period and/or in the 11 months before the measurement period.

Source: Medical claims

Steward: SUD Monitoring Protocol

4. Medicaid Beneficiaries with SUD Diagnosis (annually)

Description: Number of beneficiaries who receive MAT or a SUD-related treatment service with an associated SUD diagnosis during the measurement period and/or in the 12 months before the measurement period.

Source: Medical claims

Steward: SUD Monitoring Protocol

5. Medicaid Beneficiaries Treated in an IMD for SUD

Description: Number of beneficiaries with a claim for inpatient/residential treatment for SUD in an IMD during the measurement period.

Source: Medical claims

Steward: SUD Monitoring Protocol

6. Any SUD Treatment

Description: Number of beneficiaries enrolled in the measurement period receiving any SUD treatment service, facility claim, or pharmacy claim during the measurement period.

Source: Medical claims

Steward: SUD Monitoring Protocol

7. Early Intervention

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

Source: Medical claims

Steward: SUD Monitoring Protocol

8. Outpatient Services

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

Source: Medical claims

Steward: SUD Monitoring Protocol

9. Intensive Outpatient and Partial Hospitalization Services

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

Source: Medical claims

Steward: SUD Monitoring Protocol

10. Residential and Inpatient Services

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

Source: Medical claims

Steward: SUD Monitoring Protocol

11. Withdrawal Management

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

Source: Medical claims

Steward: SUD Monitoring Protocol

12. Medication-Assisted Treatment

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

Source: Medical claims

Steward: SUD Monitoring Protocol

13. Provider Availability

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

Source: Provider enrollment database; Medical claims

Steward: SUD Monitoring Protocol

14. Provider Availability – MAT

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

Source: Provider enrollment database; Medical claims; SAMHSA datasets

Steward: SUD Monitoring Protocol

15.1. Initiation of Treatment for Alcohol Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of alcohol abuse or dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth, or medication treatment within 14 days of the diagnosis.

Source: Medical claims or EHR

Steward: NCQA

15.2. Engagement of Treatment for Alcohol Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of alcohol abuse or dependence who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.

Source: Medical claims or EHR

Steward: NCQA

15.3. Initiation of Treatment for Opioid Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth, or medication treatment within 14 days of the diagnosis.

Source: Medical claims or EHR

Steward: NCQA

15.4. Engagement of Treatment for Opioid Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of opioid abuse or dependence who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.

Source: Medical claims or EHR

Steward: NCQA

15.5. Initiation of Treatment for Other Drug Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of other drug abuse or dependence who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth, or medication treatment within 14 days of the diagnosis.

Source: Medical claims or EHR

Steward: NCQA

15.6. Engagement of Treatment for Other Drug Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of other abuse or dependence who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.

Source: Medical claims or EHR

Steward: NCQA

15.7. Initiation of Treatment for Total AOD Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of AOD who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth, or medication treatment within 14 days of the diagnosis.

Source: Medical claims or EHR

Steward: NCQA

15.8. Initiation of Treatment for Total AOD Abuse or Dependence

Description: Percentage of beneficiaries age 18 and older with a new episode of AOD who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.

Source: Medical claims or EHR

Steward: NCQA

17.1. Follow-up after ED Visit for AOD: Age 18 and older (30 days)

Description: Percentage of emergency department (ED) visits for beneficiaries age 18 and older with a principal diagnosis of alcohol or other drug (AOD) abuse or dependence who had a follow-up visit for AOD abuse or dependence within 30 days of the ED visit (31 total days).

Source: Medical claims

Steward: HEDIS/NCQA

17.1. Follow-up after ED Visit for AOD: Age 18 and older (7 days)

Description: Percentage of emergency department (ED) visits for beneficiaries age 18 and older with a principal diagnosis of alcohol or other drug (AOD) abuse or dependence who had a follow-up visit for AOD abuse or dependence within 7 days of the ED visit (8 total days).

Source: Medical claims

Steward: HEDIS/NCQA

17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (30 days)

Description: Percentage of emergency department (ED) visits for beneficiaries age 18 and older with a principal diagnosis of mental illness or intentional self-harm and who had a follow-up visit for mental illness within 30 days of the ED visit (31 total days).

Source: Medical claims

Steward: HEDIS/NCQA

17.2. Follow-up after ED Visit for Mental Illness: Age 18 and older (7 days)

Description: Percentage of emergency department (ED) visits for beneficiaries age 18 and older with a principal diagnosis of mental illness or intentional self-harm and who had a follow-up visit for mental illness within 7 days of the ED visit (8 total days).

Source: Medical claims

Steward: HEDIS/NCQA

18. Use of Opioids at High Dosage in Persons Without Cancer

Description: Percentage of beneficiaries age 18 and older who received prescriptions for opioids with an average daily dosage greater than or equal to 90 morphine milligram equivalents (MME) over a period of 90 days or more. Beneficiaries with a cancer diagnosis, sickle cell disease diagnosis, or in hospice or palliative care are excluded.

Source: Medical claims

Steward: PQA

21. Concurrent Use of Opioids and Benzodiazepines

Description: Percentage of beneficiaries age 18 and older with concurrent use of prescription opioids and benzodiazepines. Beneficiaries with a cancer diagnosis, sickle cell disease diagnosis, or in hospice or palliative care are excluded.

Source: Medical claims

Steward: PQA

22. Continuity of Pharmacotherapy for Opioid Use Disorder

Description: Percentage of adults 18 years of age and older with pharmacotherapy for OUD who have at least 180 days of continuous treatment.

Source: Medical claims

Steward: USC

23. ED Utilization for SUD per 1,000 Medicaid Beneficiaries

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

Source: Medical claims

Steward: SUD Monitoring Protocol

24. Inpatient Stays for SUD per 1,000 Medicaid Beneficiaries

Description: All beneficiaries with full benefits enrolled in Medicaid for any amount of time during the measurement period.

Source: Medical claims

Steward: SUD Monitoring Protocol

25. Readmissions Among Beneficiaries with SUD

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

Source: Medical claims

Steward: SUD Monitoring Protocol

32. Access to Preventive/Ambulatory Health Services for Adults with SUD

Description: The percentage of Medicaid beneficiaries with SUD who had an ambulatory or preventive care visit during the measurement period.

Source: Medical claims

Steward: NCQA

36. Average Length of Stay in IMDs

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

Source: Medical claims; State-specific IMD database

Steward: SUD Monitoring Protocol

ED Spending (PMPM)

Description: Spending on emergency department visits.

Source: Medical claims

Steward: SUD Monitoring Protocol

Other Outpatient Spending (PMPM)

Description: Spending on outpatient visits that do not occur in the ED, including primary care visits and same-day discharges from an inpatient facility. Excludes behavioral health visits.

Source: Medical claims

Steward: SUD Monitoring Protocol

Inpatient Spending (PMPM)

Description: Spending on inpatient visits. Includes inpatient facility and professional spending and excludes behavioral health.

Source: Medical claims

Steward: SUD Monitoring Protocol

Prescription Drug Spending (PMPM)

Description: Spending on prescription drugs.

Source: Prescription drug claims

Steward: SUD Monitoring Protocol

Behavioral Health Spending (PMPM)

Description: Spending on outpatient and inpatient behavioral health services

Source: Medical claims

Steward: SUD Monitoring Protocol

Total Spending (PMPM)

Description: The total spending on ED visits, other outpatient visits, inpatient visits, prescription drug claims, and behavioral health services.

Source: Medical and prescription drug claims

Steward: SUD Monitoring Protocol

SUD IMD Spending (PMPM)

Description: Spending on SUD IMD services with an SUD diagnosis and/or procedure code.

Source: Medical claims; State-specific IMD database

Steward: SUD Monitoring Protocol

Non-SUD IMD Spending (PMPM)

Description: Total spending with an SUD diagnosis and/or procedure code, excluding SUD IMD services.

Source: Medical and prescription drug claims; State-specific IMD database

Steward: SUD Monitoring Protocol

Non-SUD Spending (PMPM)

Description: Total spending without an SUD diagnosis and/or procedure code

Source: Medical and prescription drug claims

Steward: SUD Monitoring Protocol

Supportive Housing Services – Access and Utilization

Description: Number of beneficiaries with SUD receiving supportive housing services during the measurement period.

Source: Medical claims

Steward: OHA

Supportive Employment Services – Access and Utilization

Description: Number of beneficiaries with SUD receiving supportive employment services during the measurement period.

Source: Medical claims

Steward: OHA

Peer-Delivered Services

Description: Number of beneficiaries with SUD receiving peer-delivered services (PDS) during the measurement period.

Source: Medical claims

Steward: OHA

Number of SUD IMDs providing treatment for SUD

Description: The number of IMD facilities enrolled in OHP and providing SUD treatment during the measurement period.

Source: State provider enrollment SUD IMD data; Medical claims

Steward: OHA

Number of beds in SUD IMDs providing treatment for SUD

Description: The number of beds in SUD IMD facilities enrolled in OHP and providing SUD treatment during the measurement period.

Source: State provider enrollment SUD IMD data

Steward: OHA

Quantitative methods

The pre-post analysis used here took the following form:

$$Y_{it} = \alpha + \theta * Post_t + b * X_{it} + \varepsilon_{it}$$

where Y_{it} was the performance metric for member *i* at time *t*; $Post_t$ was equal to one if the observation occurred during the post-intervention period (2022) and zero otherwise; X_{it} was a vector of demographic covariates; and ε_{it} was a random error term clustered at the primary care service area level.
The coefficient of interest, θ, estimated the degree of change for the outcome of interest between the pre/post-intervention periods after adjusting for demographic variables (age group, gender, race, and geography of residence). This value was listed in tables throughout this report as "Adjusted Change."