Oregon 1115(a) Medicaid Demonstration Waiver Evaluation Design

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Acronyms

- AAA: Area Agencies on Aging
- AHRQ: Agency for Healthcare Research and Quality
- APAC: All Payers All Claims
- BH: Behavioral Health
- BRFSS: Behavioral Risk Factor Surveillance System
- CAHPS: Consumer Assessment of Healthcare Providers and Systems
- CBO: Community Based Organization
- CCBF: Community Capacity Building Funds
- CCO: Coordinated Care Organization
- CDC: Centers for Disease Control
- CE: Continuous Eligibility
- CHIP: Children's Health Insurance Program
- CIE: Community Information Exchange
- CMS: Centers for Medicare & Medicaid Services
- CORE: Center for Outcomes Research and Education
- CPOP: Community Partner Outreach Program
- CHW: Community Health Worker
- DQA: Dental Quality Alliance
- DSHP: Designated State Health Program
- DiD: Difference in Differences
- EPA: Environmental Protection Agency
- EPSDT: Early and Periodic Screening, Diagnostic, and Treatment
- ERDC: Employment-Related Day Care
- FFS: Fee for Service
- FPL: Federal Poverty Level
- HCRIS: Healthcare Cost Report Information System
- HCUP-SID: Healthcare Cost and Utilization Project, State Inpatient Databases

- HIT: Health Information Technology
- HMIS: Homeless Management Information System
- HRP: Hospital Reporting Program
- HRSN: Health-Related Social Needs
- ICS: Integrated Client Services
- IDD: Intellectual or Developmental Disability
- IMD: Institution for Mental Diseases
- IT: Information Technology
- MAC: Medicaid Advisory Committee
- MMIS: Medicaid Management Information System
- ODDS: Oregon Office of Developmental Disabilities Services
- ODHS: Oregon Department of Human Services
- OHA: Oregon Health Authority
- OHCS: Oregon Housing and Community Services
- OHP: Oregon Health Plan
- ORRAI: Oregon Reporting, Research, Analytics, and Integration
- PHQ: Patient Health Questionnaire
- PMCA: Pediatric Medical Complexity Algorithm
- PMPM: Per Member Per Month
- PMPY: Per Member Per Year
- PRAPARE: Protocol for Responding to and Assessing Patients’ Assets, Risks, and Experiences
- PROMIS-10: Patient-Reported Outcomes Measurement Information System
- REALD: Race, Ethnicity, Language, and Disability
- SNAP: Supplemental Nutrition Assistance Program
- SOGI: Sexual Orientation and Gender Identity
- SUD: Substance Use Disorder
- TAF: T-MSIS Analytic File
- TANF: Temporary Assistance for Needy Families
- TME: Temporary Medicaid Expansion
- TPC: Third Party Contractor
- WIC: Women, Infants, and Children
- YSHCN: Young Adults with Special Health Care Needs

Chapter 1. General background

Waiver overview

Demonstration name:	Oregon Health Plan (OHP), Project Number 11-W-00415/10
Approval date:	September 28, 2022
Waiver time period:	October 1, 2022, through September 30, 2027

Oregon's latest 1115(a) Medicaid Demonstration Waiver (the "demonstration") builds on achievements from previous demonstration efforts, with a specific focus on meaningful progress toward health equity. In this demonstration, Oregon aims to address some of the complex challenges facing many of its underserved residents, including individuals experiencing major life transitions such as children aging out of foster care, people exiting carceral settings, youth with complex medical needs approaching adulthood, individuals experiencing homelessness or at risk of losing housing, and adults transitioning to dual Medicaid-Medicare enrollment. The demonstration goals are to:

- Address and advance health equity
- Create a more equitable, culturally- and linguistically-responsive health care system
- Ensure people can maintain their health coverage
- Improve health outcomes by addressing health-related social needs

The Centers for Medicare & Medicaid Services (CMS) approved three main policy initiatives that support these goals:

1. **Continuous eligibility** (CE) to increase access to care and to promote better health. Specifically, the demonstration allows for continuous Medicaid/OHP eligibility and enrollment for children up to age six, and two years of continuous enrollment for OHP members ages six and older.

2. Coverage of new **health-related social needs** (HRSN) benefits for certain members facing critical life transitions. HRSN benefits cover housing and nutrition supports, supports for extreme climate events, and outreach and engagement needed to support those services.

3. More access to services for **young adults with special health care needs** (YSHCN). The demonstration expands OHP eligibility and pediatric benefits up to age 26 for youth who have complex medical and behavioral health (BH) needs and incomes up to 205% of the Federal Poverty Level (FPL).

In addition, an April 2023 amendment to the waiver authorized a **temporary Medicaid expansion (TME)** to adults ages 19-64 with incomes at 138-200% of FPL, as long as they were already enrolled in Medicaid. The goal of this expansion was to maintain Medicaid/OHP coverage for this group until the launch of Oregon's Basic Health Program, known as OHP Bridge, in July 2024.

The demonstration also authorizes up to $535 million in Designated State Health Program (DSHP) expenditures to support the delivery of HRSN services, youth with special healthcare needs, and reentry pre-release services and administrative costs. Up to $119 million in DSHP funds were authorized to support HRSN infrastructure – i.e. capacities and system processes HRSN providers need to be able to participate in the Medicaid delivery system and deliver HRSN benefits to eligible OHP members. Up to $11.9 million of the HRSN infrastructure funds will be set aside for use by Oregon's Nine Federally Recognized Tribes to support the same HRSN provider capacity building for HRSN services.

This demonstration enables Oregon to test the efficacy of innovative practices aimed at promoting consistently high-quality, coordinated, and integrated care. The demonstration will lead to additional populations being served by Medicaid, mitigate longstanding barriers to continuity and access to care, and provide new HRSN services during critical life transitions. The goal of combining the provision of medical assistance with new HRSN services to address inadequate food, housing, and other root-cause issues that lead to poor health for people and families is to improve the overall health of communities and populations served.

Overview of evidence

Continuous eligibility. Strong evidence exists showing that continuity of coverage and reduced frequency of disenrollment and re-enrollment (also known as churn) supports better access to and continuity of care (1,2). Better access in turn leads to increased utilization of important preventive care services and decreased use of acute and costly types of care over time (1–4). Because individuals experiencing churn are disproportionately likely to be people of color (2), the CE and TME policies also have the potential to reduce inequities in churn. A more extensive overview of relevant evidence can be found in Chapter 2.

Health-related social needs. CMS has recognized that addressing social determinants of health can improve population health, reduce disability, and lower overall health care costs in the Medicaid program (5). At the individual level, actions to improve adverse social conditions and remedy unmet needs can affect health care utilization and health status via several mechanisms, including: connections to social services that reduce social risk; emotional support arising from positive relationships with social service navigators; better connection to health care services; and the use of information about social need and services to tailor an individual's health care services (6). A more extensive overview of relevant evidence can be found in Chapter 3.

Young adults with special health care needs. This component of the demonstration aims to smooth the transition from pediatric to adult health care by allowing YSHCN to retain child eligibility levels and benefits through age 25. As with the broader CE policy, which also applies to young adults in this category, evidence suggests that continuity of coverage supports improved access to and utilization of care. This consistency is particularly important for young adults with complex medical and behavioral health needs. Some of the young adults in this group will also be eligible for, and benefit from, the HRSN policy described above. A more extensive overview of relevant evidence can be found in Chapter 4.

Preparation of the draft evaluation design

Independent evaluation and CORE

This draft evaluation design was prepared by the Center for Outcomes Research and Education (CORE). CORE is an independent team of scientists, researchers, and data experts housed within the Providence Health System in Oregon, with a mission to drive meaningful improvements in health and health equity through collaborative research, evaluation, analytics, and strategic consulting. For over 20 years, CORE has supported some of Oregon's most innovative health care transformation efforts including: research on the Oregon Health Insurance Experiment; the Life Experiences Study exploring connections between life experiences and health outcomes of people enrolled in Medicaid; and the Tri-County Health Commons Project, which tested ideas for improving care and controlling costs in Medicaid with Oregon's largest Coordinated Care Organization (CCO). The Oregon Health Authority (OHA) contracted with CORE to develop evaluation designs for each of the policies being implemented as part of this demonstration.

Once the evaluation designs have been approved by CMS, OHA will select an independent evaluator (or multiple independent evaluators) to conduct the evaluation(s).

Interested parties engagement

As part of the evaluation design process, CORE worked with OHA to identify parties who might be interested in the demonstration evaluation and solicited input and feedback on evaluation questions and approaches. Interested parties engagement strategies included:

- Meetings and discussions with many groups including the Oregon Medicaid Advisory Committee (MAC), the Community Advisory Councils of Oregon's CCOs, parents of YSHCN; staff representatives from OHA's Ombuds Program and Community Partner Outreach Program (CPOP), and staff from organizations such as the Oregon Council on Developmental Disabilities and the Oregon Center for Children and Youth with Special Health Needs.
- Presentations to share information about development of the evaluation design and invite input or feedback at venues such as OHA's All Come / Para Todos webinars, HRSN partner work sessions, and CCO work sessions.
- Two rounds of direct outreach to a broad list (over 700 contacts) of CCOs, health systems, community-based organizations, advocacy groups, and other Oregon-based entities with an interest in Medicaid and health system reform.

- Review of comments received by OHA in earlier stages of waiver development, questions received by OHA's Waiver Feedback and Engagement team, and documents reflecting recent OHP member input and feedback (e.g., Annual Ombuds reports, reports from MAC's Advancing Consumer Experiences subcommittee, and community feedback documents compiled by OHA External Relations team).

Suggestions from interested parties were used to identify focus populations, adjust research or implementation questions, and prioritize specific outcome measures. Much of the input received to date has aligned with the CMS requirements for the evaluation, including a strong interest in demonstration implementation questions. Interested parties also frequently concurred with CMS prompts for examination of inequities in waiver policy experience and outcomes and suggested a number of stratified analyses focused on OHP populations most harmed by health and social inequities.

Some specific ideas from interested parties that are reflected in this draft design include:

- Questions about the impact of waiver policies on access to and use of specific types of care, such as dental/oral health care and substance use treatment.
- Questions about how HRSN outreach and engagement will overlap with existing care coordination infrastructure and non-HRSN case management providers, and how this might impact OHP member experience.
- An interest in understanding what happens for OHP members and the providers or groups serving them once the allowable HRSN benefits or benefit periods are exhausted.
- Questions about the roll-out and implementation of the YSHCN component of the waiver, including CCO activities and member experience.
- A desire that the evaluation design includes a focus on understanding the presence of inequities and systemic barriers, and any impacts the demonstration has on them.

CORE tracked interested parties' priorities and suggestions throughout the design process. Suggestions that could not be included in this draft design because of budget constraints or other barriers have been compiled and shared with OHA, in the hope that external resources can be found to address them.

Attention to health equity

OHA's strategic goal is to eliminate health inequities[1] in Oregon by 2030 and meaningful progress toward health equity is a primary goal of the current demonstration. In addition to attention to existing inequities and systemic barriers as described above, this evaluation design

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[1] Note that OHA is committed to using the term "inequity" instead of "disparity" when referring to differences arising or resulting from social and structural injustices. Later in this document, some evaluation questions identified by CMS in the waiver Terms & Conditions or in evaluation guidance documents have been edited to change disparities to inequities, to reflect this commitment.

includes distinct research questions focused on the improvement of health equity for OHA priority populations. It also proposes a variety of approaches designed to mitigate potential equity concerns related to data sources, collection, or analysis, such as:

- Plans for analyses to be disaggregated for different populations of interest to the greatest extent possible. Disaggregation for populations most at risk of harm from health inequities will help the State understand progress and gaps and whether the waiver is contributing to Oregon's goal of eliminating health inequities. Over the past several years, OHA has established requirements and infrastructure designed to increase and standardize data collection on race, ethnicity, language, and disability (REALD) as well as sexual orientation and gender identity (SOGI). These efforts will support disaggregated analysis in the waiver evaluation.
- Plans to ensure that OHP members' perspectives are captured through surveys and interviews.
- Sampling strategies designed to enable production of reliable estimates for smaller groups of Medicaid members and members who have been most harmed by health inequities, as well as monitoring to assess how well different groups are represented among participants.
- Use of plain language in the newly designed HRSN beneficiary survey.
- Translation and transcreation of the newly designed HRSN beneficiary survey into multiple languages, and the provision of interpretation services when conducting interviews.
- Provision of compensation to participants who complete interviews, focus groups, or surveys.

A key practice for equitable evaluation is to incorporate the voices of the populations most impacted by different waiver policies into every aspect of the evaluation, from design through implementation. To this end, the interested parties engagement process attempted to gather input and feedback from different groups of OHP members and those representing them, as described above. However, the timeline for development of this evaluation design and the need to also address CMS' evaluation interests meant that it was not possible to create an evaluation design strongly driven by the populations most affected by the waiver. Practices for engaging interested parties in research and evaluation exist on a spectrum ranging from top-down to community-driven methods. The figure below, developed by Facilitating Power (7), illustrates this spectrum. Engagement of OHP members and populations most harmed by inequities has fallen largely in the inform—consult—involve part of this spectrum. Oregon will address this limitation by building an evaluation governance structure that continues to engage OHP members, including those disproportionately affected by social and structural inequities, throughout the implementation of the evaluation and interpretation of results.

Figure 1.1. The spectrum of community engagement to ownership

Engagement with the Nine Federally Recognized Tribes of Oregon

Because of the government-to-government relationship and ongoing consultation channels between the State and the Nine Federally Recognized Tribes of Oregon, CORE did not engage directly with Tribal Governments during the waiver evaluation design phase. Tribal engagement will be negotiated and prioritized in the implementation phase of evaluation.

How to read this document

This document is divided into chapters that describe the draft evaluation design for each of the major policy initiatives in the waiver: (1) continuous eligibility and temporary Medicaid expansion; (2) coverage for health-related social needs; and (3) expanded eligibility and benefits for young adults with special health care needs. A fourth chapter describes the draft design for addressing demonstration cost and sustainability evaluation questions. Following CMS guidance, each chapter contains:

A. Evaluation questions and hypotheses, as well as logic model(s) for the relevant policy and an overview of the proposed evaluation approach
B. Methodology details, including proposed evaluation design, focus and comparison populations, measures, data sources, and analytic methods
C. Methodological Limitations

In addition, this draft design includes the following appendices:

1. Secondary data source descriptions
2. Evaluation timeline and major milestones
3. Evaluation budget
4. Information about Oregon’s process for obtaining an independent evaluator(s)

Chapter 2. Continuous eligibility and temporary Medicaid expansion

Continuous eligibility and temporary Medicaid expansion background

With the continuous eligibility (CE) and temporary Medicaid expansion (TME) components of the demonstration, Oregon is addressing health inequities within the state related to access to coverage and coverage continuity. Barriers to health coverage and coverage continuity disproportionately impact and harm communities of color (8,9), people with disabilities (8,9), people with limited English proficiency, tribal communities, and immigrant and refugee communities (10), and can create lasting health inequities. Oregon prioritizes enrollment into the Oregon Health Plan (OHP) and access to care to decrease health inequities and improve health outcomes for OHP members across the state, with intentional strategies towards those most impacted by health inequities.

This demonstration includes two main strategies to close gaps in the current system that lead to preventable loss of coverage: 1) a CE policy that allows children to be continuously enrolled until age 6 and for people ages 6 and older to be continuously enrolled for 24 months; and 2) TME, which is an amendment to this demonstration, and will allow individuals 18 – 64 years of age with income between 133-200% of the federal poverty level (FPL) to remain enrolled in OHP until Oregon's OHP Bridge Program is implemented. All OHP members, with the exception of those who are receiving OHP-covered home- and community-based services in order to remain in community-based settings, qualify for the CE periods. The strategies aim to advance Oregon's goal to maximize coverage for children and adults in Oregon.

Goals and evidence for CE

The goal of extending the time frame for younger children to remain enrolled in OHP and allowing members ages 6 and older to remain enrolled for 24 months is to stabilize their health coverage, increase continuity in coverage, and reduce frequency of disenrollment and re-enrollment, otherwise known as churn, which could allow for more predictable access to, and continuity of, care (1,2). For households with children under six years of age, the CE policy is also intended to support family stability and resiliency.

Eliminating churn will reduce administrative costs and can ease administrative burden for families needing to re-apply (11,12). Additionally, previous studies suggest that a decrease in churn and greater continuity of care leads to increased optimal use of health care including greater use of preventive care services and decreased use of acute and costly types of care, such as emergency department use (1–4).

The CE policy has the potential to impact a substantial population: prior to the COVID-19 pandemic, approximately 34% of people enrolling in OHP had been previously enrolled within the past year, and one-quarter had been previously enrolled within the past 6 months; losing OHP coverage was the main reason people gave for being uninsured (13). Further, certain groups are overrepresented in the experience of churn, such as individuals whose employment status (e.g. irregular hours, working multiple jobs) can lead to monthly changes to income, or those who regularly move addresses (14). Previous studies have also demonstrated that individuals experiencing churn are disproportionately likely to be people of color (2). The CE policy therefore also has the potential to reduce inequities in churn.

Goals and evidence for TME

An amendment to this demonstration, which was approved by the Centers for Medicare and Medicaid Services (CMS) in April 2023, allows for TME for individuals 18 – 64 years of age with income between 139-200% FPL so that they may remain enrolled until OHP Bridge is implemented. OHP Bridge will provide health care coverage to individuals with incomes above the traditional OHP limits (up to 200% FPL) who do not have access to affordable coverage elsewhere and the TME policy will preserve coverage for people who were continuously enrolled during the COVID-19 public health emergency, which began unwinding in summer 2023, until the OHP Bridge launch (anticipated to be July 1, 2024). Covering this 1-year gap is intended to reduce the likelihood of loss of coverage or churn, and help maintain continuity of care, particularly because OHP Bridge enrollees can stay enrolled with the same Coordinated Care Organization (CCO) as they had under the TME policy, with access to the same network of health care providers.

As with CE above, decreasing churn and helping individuals maintain continuity of care improves use of preventive care services, leads to better access to care overall, and ultimately results in better health outcomes (2,15). Further, there were especially notable gains in health care coverage among communities of color during the COVID-19 pandemic (16,17), in part resulting from the public health emergency addressing inequities in coverage resulting from economic barriers and systemic racism, and the TME policy is expected to maintain these reductions in coverage inequities.

Evaluation questions and hypotheses

The evaluation design of the CE and TME policies in the 2022 – 2027 1115(a) Medicaid Demonstration Waiver includes both implementation questions that focus on how the policies were implemented and research hypotheses/evaluation questions that focus on understanding the impacts of the policies. Importantly, the research hypotheses include evaluation questions specifically addressing the impact of the CE and TME policies on inequities in enrollment, churn, health care outcomes, and connection to other public benefit programs. All of the high-level implementation and research questions below align with the Centers for Medicare & Medicaid Services' (CMS) interests as outlined in the demonstration approval and input from Oregon interested parties is reflected in the inclusion of particular outcomes of interest (e.g. access to behavioral and oral health care) and a sub-question about the experience of members affected by the TME policy.

Although several of the implementation and evaluation questions refer to CE and TME together, all analyses will be conducted separately for each policy.

Oregon proposes the following implementation question and research hypotheses:

CE and TME implementation question 1. How are the CE and TME policies being implemented?

- *CE and TME implementation question 1a.* Did implementation of the CE and TME policies happen as expected, and what factors facilitated or impeded success?
- *CE and TME implementation question 1b.* What impact does the CE policy have on administrative burden related to redetermination for the Oregon Health Authority (OHA), Oregon Department of Human Services (ODHS), Area Agency on Aging (AAA), and CCO staff?
- *CE and TME implementation question 1c.* What is the understanding of the CE policy among OHP members?

CE and TME hypothesis 1. The CE and TME policies will improve the experience of enrollment in Medicaid for OHP members.

- *CE and TME evaluation question 1a.* What is the experience of the CE policy for OHP members, including what impact it has on administrative burden (e.g., time and stress) related to renewals?
- *CE and TME evaluation question 1b*. For OHP members eligible for the TME policy, what is the experience of transitioning from OHP under the public health emergency to TME, and from TME to OHP Bridge?

CE and TME hypothesis 2. The CE and TME policies will increase enrollment, improve continuity of Medicaid coverage, and reduce churn; and will decrease inequities in all these outcomes.

- *CE and TME evaluation question 2a.* How does the CE policy impact enrollment and renewal rates?
- *CE and TME evaluation question 2b*. How does the CE policy impact rates of churn?
- *CE and TME evaluation question 2c*. How long are individuals enrolled in Medicaid under the CE policy?
- *CE and TME evaluation question 2d.* Which members covered by the TME policy end up on OHP Bridge?
- *CE and TME evaluation question 2e.* How do the CE and TME policies impact inequities in enrollment, coverage continuity, and churn?

CE and TME hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality for OHP members; and will decrease inequities in all these areas.

- *CE and TME evaluation question 3a.* How do the CE and TME policies impact access to and use of preventive and primary care, including continuity of care?

- *CE and TME evaluation question 3b.* How do the CE and TME policies impact use of acute and costly care, especially potentially preventable emergency department visits and hospitalizations?
- *CE and TME evaluation question 3c.* How do the CE and TME policies impact access to and use of behavioral health care?
- *CE and TME evaluation question 3d.* How do the CE and TME policies impact access to and use of oral health care?
- *CE and TME evaluation question 3e.* How do the CE and TME policies impact inequities in health care access, utilization, and quality?

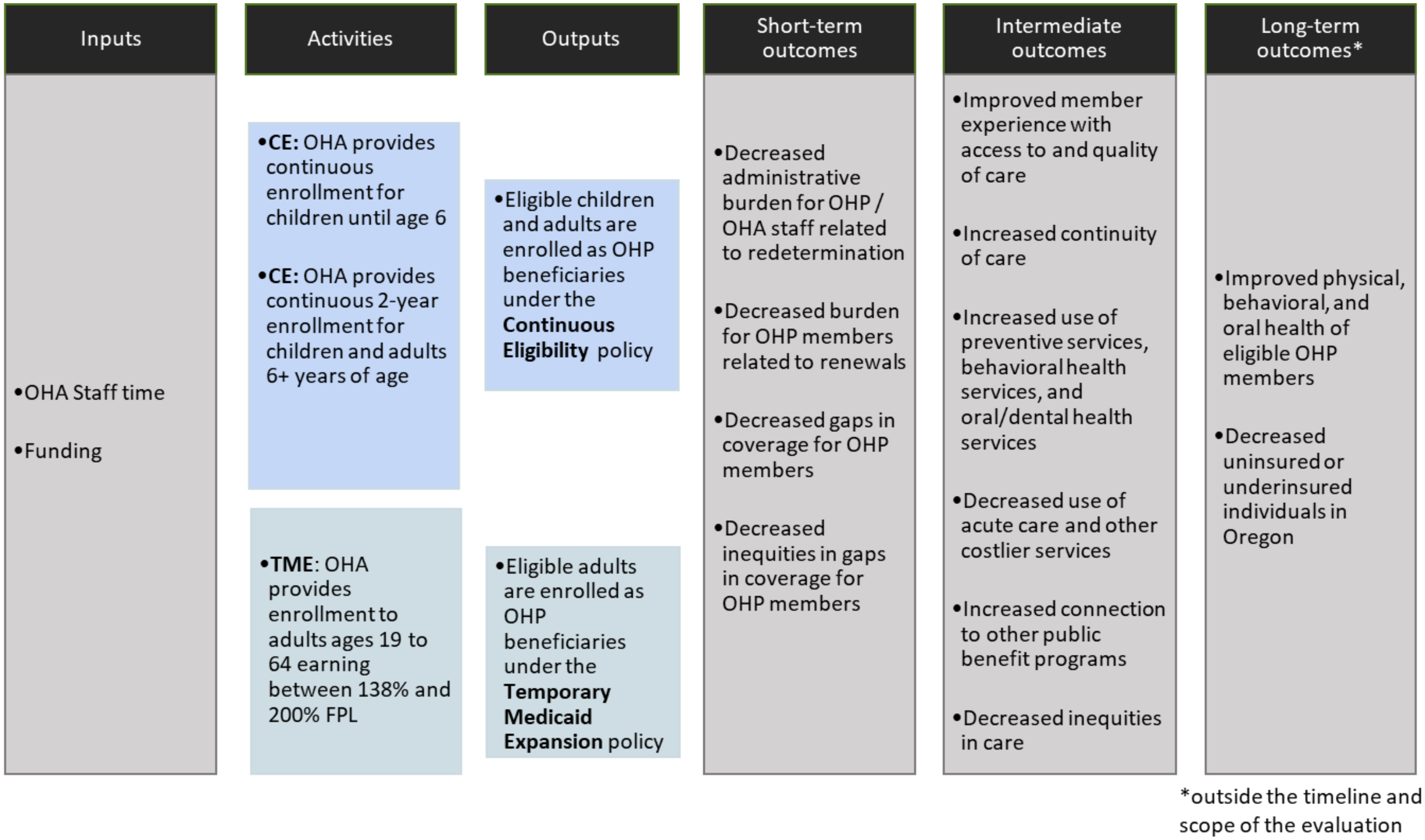
CE and TME hypothesis 4. The CE policy will improve access overall, and decrease inequities in access, to other public benefits for OHP members.

- *CE and TME evaluation question 4a.* How does the CE policy impact connection to non-health care public benefit programs (such as Supplemental Nutrition Assistance Program [SNAP], Temporary Assistance for Needy Families [TANF], Employment-Related Day Care [ERDC] assistance, or Special Supplemental Nutrition Program for Women, Infants, and Children [WIC])?
- *CE and TME evaluation question 4b.* How does the CE policy impact inequities in connection to non-health care public benefits?

Logic model

The following logic model outlines the path through which the CE and TME policies are anticipated to reduce gaps in coverage (short-term outcome; approximately 0-12 months from redetermination), improve health care access and quality (intermediate outcomes; approximately 12 to 24 months), and eventually improve health (long-term outcome; beyond the evaluation timeline and scope). By removing barriers to continuous coverage, CE and TME policies will also reduce inequities in these outcomes among OHP members.

Figure 2.1. Shared CE and TME logic model



Inputs

- OHA Staff time
- Funding

Activities

- **CE:** OHA provides continuous enrollment for children until age 6
- **CE:** OHA provides continuous 2-year enrollment for children and adults 6+ years of age
- **TME**: OHA provides enrollment to adults ages 19 to 64 earning between 138% and 200% FPL

Outputs

- Eligible children and adults are enrolled as OHP beneficiaries under the **Continuous Eligibility** policy
- Eligible adults are enrolled as OHP beneficiaries under the **Temporary Medicaid Expansion** policy

Short-term outcomes

- Decreased administrative burden for OHP / OHA staff related to redetermination
- Decreased burden for OHP members related to renewals
- Decreased gaps in coverage for OHP members
- Decreased inequities in gaps in coverage for OHP members

Intermediate outcomes

- Improved member experience with access to and quality of care
- Increased continuity of care
- Increased use of preventive services, behavioral health services, and oral/dental health services
- Decreased use of acute care and other costlier services
- Increased connection to other public benefit programs
- Decreased inequities in care

Long-term outcomes*

- Improved physical, behavioral, and oral health of eligible OHP members
- Decreased uninsured or underinsured individuals in Oregon

*outside the timeline and scope of the evaluation

Approach overview table

The table below provides the research question, proposed outcome measures, sample/population, comparison or disaggregation groups; data sources, and analytic methods for the CE and TME implementation questions and research hypotheses. Further details on the outcomes, focus and comparison populations, data sources, and analytic methods are given in the methodology section following the table.

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 1. How are the CE and TME policies being implemented?				
Implementation question 1a. Did implementation of the CE and TME policies happen as expected, and what factors facilitated or impeded success?	- Description of deviations from implementation plan - Description of outreach and communication efforts - Description of successes and challenges - Description of barriers and facilitators	Sample: - OHA / ODHS / AAA staff - Community Partner Outreach Program (CPOP) staff - CCO staff - ONE Customer Service Center staff	Interviews or focus groups	Qualitative analysis
Implementation question 1b. What impact does the CE policy have on administrative burden related to redetermination for OHA / ODHS / AAA & CCO staff?	- Redetermination burden - Impact on ex parte renewals	Sample: - OHA / ODHS / AAA staff - CCO staff	Interviews or focus groups	Qualitative analysis
Implementation question 1c. What is the understanding of the CE policy among OHP members?	- Member understanding of CE benefits	Sample: Adult OHP members and parents of child OHP members eligible under the CE policy	Interviews or focus groups	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The CE and TME policies will improve the experience of enrollment in Medicaid for Oregon's Medicaid members.				
Evaluation question 1a. What is the experience of the CE policy for OHP members, including what impact it has on the burden (e.g., time and stress) related to renewals?	- Total ONE Customer Service Center call volume - Proportion of ONE Customer Service Center calls abandoned - Average length of wait time for accepted ONE Customer Service Center calls - Overall satisfaction with service received - ODHS employees' level of helpfulness, courtesy, and respect - ODHS employees' ability to answer questions - Member experience with renewing enrollment - Barriers and facilitators to enrollment faced by members - Member satisfaction with CE benefits	Sample: Adult OHP members and parents of child OHP members subject to the CE policy	ONE Customer Service Center Dashboard Interviews or focus groups	Descriptive analysis (e.g. means and percentages) Trends over time Qualitative analysis
Evaluation question 1b. What is the experience of OHP members transitioning from OHP to TME status, and from TME to OHP Bridge?	- Member experience enrolling in OHP under TME and OHP Bridge - Barriers and facilitators to enrollment faced by members	Sample: OHP members covered under the TME policy	Interviews or focus groups	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 2. The CE and TME policies will increase enrollment, improve continuity of Medicaid coverage, and reduce churn; and will decrease inequities in all these outcomes.				
Evaluation question 2a. How does the CE policy impact enrollment and renewal rates?	- Enrollment rates - Renewal rates - Ex parte renewal rates	Sample: OHP members subject to the CE policy	Oregon Medicaid enrollment data Medicaid Re-determinations Dashboard ONE Eligibility system	Descriptive analysis (e.g. means and percentages) Trends over time Interrupted time series (ITS) (if appropriate)
Evaluation question 2b. How does the CE policy impact rates of churn?	- Rates of gaps in Medicaid coverage - Length of gaps in Medicaid coverage	Sample: OHP members subject to the CE policy Possible comparison groups: - Medicaid members from other states (without the CE policy) - OHP members enrolled 2018 – 2019	Oregon Medicaid enrollment data Medicaid claims from other states	Trends over time Comparative statistics - Pre-post comparison - Multivariable regression - Difference-in-differences (DiD) analysis
Evaluation question 2c.	- Length of continuous	Sample: OHP members subject	Oregon	Descriptive

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 2. The CE and TME policies will increase enrollment, improve continuity of Medicaid coverage, and reduce churn; and will decrease inequities in all these outcomes.				
How long are individuals enrolled in Medicaid under the CE policy?	enrollment	to the CE policy	Medicaid enrollment data	analysis (e.g. means and percentages) Trends over time ITS (if appropriate)
Evaluation question 2d. Which members covered by the TME policy end up on OHP Bridge?	- OHP Bridge enrollment - Automatic OHP Bridge enrollment	Sample: OHP members covered under the TME policy	Oregon Medicaid enrollment data ONE Eligibility system	Descriptive analysis (e.g. means and percentages)
Evaluation question 2e. How do the CE and TME policies impact inequities in enrollment, coverage enrollment, coverage continuity, and churn?	- All enrollment, gaps in Medicaid (churn), length of gaps in Medicaid, and continuous enrollment outcomes	Sample: OHP members subject to the CE policy or eligible under the TME policy AND to whom the specific outcome measures apply. Groups disaggregated to the greatest degree possible: - Age - Sexual orientation and gender identity - Race/ethnicity	All data sources listed above REALD and SOGI Data Repository	Comparative statistics for group differences

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 2. The CE and TME policies will increase enrollment, improve continuity of Medicaid coverage, and reduce churn; and will decrease inequities in all these outcomes.				
		- Language preference - CCO region and/or geography (e.g., urban, rural, frontier) - Disability status - Medical complexity - CCO vs. Fee-For-Service (FFS)		

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality, for OHP members; and will decrease inequities in all these outcomes.				
Evaluation question 3a. How do the CE and TME policies impact access to and use of preventive and primary care, including continuity of care?	- Access to care - Continuity of care - Child and adolescent well-care visits - Childhood immunization status - Age-appropriate screenings - Disease specific management - Prenatal and postpartum care - Access to contraception	Sample: OHP members subject to the CE policy or eligible under the TME policy AND eligible for specific outcome measures Possible comparison groups: - Medicaid members from other states (without the TME and CE policies) for whom specific outcome measures apply - OHP members enrolled 2018 - 2019	Oregon Medicaid claims All Payers All Claims (APAC) data (for Medicare claims for dual eligible OHP members) Consumer Assessment of Healthcare Providers and	Descriptive analysis (e.g. means and percentages) Comparative statistics - Pre-post comparison - Multivariable regression - DiD analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality, for OHP members; and will decrease inequities in all these outcomes.				
			Systems (CAHPS) Survey (CE only) Medicaid claims from other states	
Evaluation question 3b. How do the CE and TME policies impact use of acute and costly care, especially potentially preventable emergency department visits and hospitalizations?	- Emergency department visits - Emergency department visits for non-emergent needs - Hospitalizations - Hospitalizations for ambulatory care sensitive conditions	Sample: OHP members subject to the CE policy or eligible under the TME policy AND to whom the specific outcome measures apply Possible comparison groups: - Medicaid members from other states (without the TME and CE policies) for whom specific outcomes measures apply - OHP members enrolled 2018 - 2019	Oregon Medicaid claims APAC data (for Medicare claims for dual eligible OHP members) Medicaid claims from other states	Descriptive analysis (e.g. means and percentages) Comparative statistics - Pre-post comparison - Multivariable regression - DiD analysis
Evaluation question 3c. How do the CE and TME policies impact access to and use of behavioral health care?	- - Emergency Department Visit for Behavioral Health Needs - Follow-Up after Hospitalization for Mental Illness - Follow-Up After Emergency	Sample: OHP members subject to the CE policy or eligible under the TME policy AND to whom the specific outcome measures apply	Oregon Medicaid claims APAC data (for Medicare	Descriptive analysis (e.g. means and percentages)

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality, for OHP members; and will decrease inequities in all these outcomes.				
	Department Visit for Alcohol and Other Drug Abuse or Dependence - Outpatient Mental Health care utilization - Early childhood social-emotional health	Possible comparison groups: - Medicaid members from other states (without the TME and CE policies) for whom specific outcome measures apply - OHP members enrolled 2018 - 2019	claims for dual eligible OHP members) Medicaid claims from other states	Comparative statistics - Pre-post comparison - Multivariable regression - DiD analysis
Evaluation question 3d. How do the CE and TME policies impact access to and use of oral health care?	- Any dental service - Preventive dental services - Oral evaluation - Dental sealants - Fluoride varnishes	Sample: OHP members subject to the CE policy or eligible under the TME policy AND to whom the specific outcome measures apply Possible comparison groups: - Medicaid members from other states (without TME or CE policies) for whom specific outcome measures apply - OHP members enrolled 2018 - 2019	Oregon Medicaid claims APAC data (for Medicare claims for dual eligible OHP members) Medicaid claims from other states	Descriptive analysis (e.g. Descriptive analysis (e.g. means and percentages) Comparative statistics - Pre-post comparison - Multivariable regression - DiD analysis
Evaluation question 3e. How do the CE and TME policies impact inequities in health	- All preventive and primary care, acute care, behavioral health care, and oral health care measures described above	Sample: OHP members subject to the CE policy or eligible under the TME policy AND to whom the specific outcome measures	All data sources listed above REALD and	Comparative statistics for group differences

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality, for OHP members; and will decrease inequities in all these outcomes.				
care access, utilization, and quality?		apply Groups disaggregated to the greatest degree possible: - Age - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g., urban, rural, frontier) - Disability status - Medical complexity - YSHCN OHP members - CCO vs. FFS	SOGI Data Repository	

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 4. The CE policy will improve access overall, and decrease inequities in access, to other public benefits for OHP members.				
Evaluation question 4a. How does the CE policy impact connection to non-health care public benefit programs?	- Enrollment in SNAP - Enrollment in WIC - Enrollment in TANF - Enrollment in ERDC - Churn in public benefit programs	Sample: OHP members subject to the CE policy AND eligible for specific public benefit programs	ONE Eligibility system Integrated Client Services	Descriptive analysis (e.g. means and percentages) Trends over time

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 4. The CE policy will improve access overall, and decrease inequities in access, to other public benefits for OHP members.				
Evaluation question 4b. How does the CE policy impact inequities in connection to non-health care public benefit programs?	- SNAP, WIC, TANF, and ERDC enrollment	Sample: OHP members or parents of child OHP members subject to the CE policy Groups disaggregated to the greatest degree possible: - Age - Gender identity - Race/ethnicity - Language preference - Urban/rural - Disability status - Children in child welfare system	ONE Eligibility system OHA/ODHS Integrated Client Services data REALD and SOGI Data Repository	Comparative statistics for group differences

Methodology

Evaluation design

The evaluation of the CE and TME policy components will use a mixed-methods study design, relying on both quantitative and qualitative data collection and analysis to assess CE and TME implementation questions and research hypotheses. CE and TME implementation question 1 will employ interviews or focus groups both with staff responsible for implementing the CE and TME policies and conducting outreach, and with OHP members to assess their understanding of CE benefits and to explore the barriers, facilitators, and impacts of implementation.

CE and TME research hypothesis 1 will interview OHP members on experiences with enrollment and satisfaction of benefits and combine this with administrative information on OHP members' interactions with the ONE Customer Service Center, which is meant to provide help navigating enrollment. The proposed path by which the CE and TME policies impact health care outcomes is through increased enrollment, improved continuity of Medicaid coverage, and decreased churn; CE and TME research hypothesis 2 will test this via Medicaid enrollment data that can be used to calculate coverage and churn outcomes. CE and TME research hypothesis 3 will then use Medicaid claims data and survey data from the CAHPS survey to quantitatively assess the impact of the policies on a variety of key health care access and utilization measures, as well as inequities in health care. Finally, CE and TME research hypothesis 4 will explore the impact of the CE policy component specifically on connection to other public health benefit programs.

CE and TME implementation question 1 and research hypothesis 1 will importantly also explore inequities in implementation of, and member experience with, either policy, while CE and TME research hypotheses 2-4 each include a specific question focused on understanding the impact of the policies on inequities in the outcomes of interest.

The CE and TME implementation question and four research hypotheses will use a range of analytic methods, including thematic analysis for the interview or focus groups; and descriptive statistics, analysis of trends over time, pre-post comparisons, multivariable regression, DiD analysis, and comparative statistics for group differences for the quantitative measures. Although the CE and TME policies are listed together in many of the implementation and evaluation questions, all analyses will be conducted separately for each policy. More detail on the analytic techniques can be found in the analysis section below.

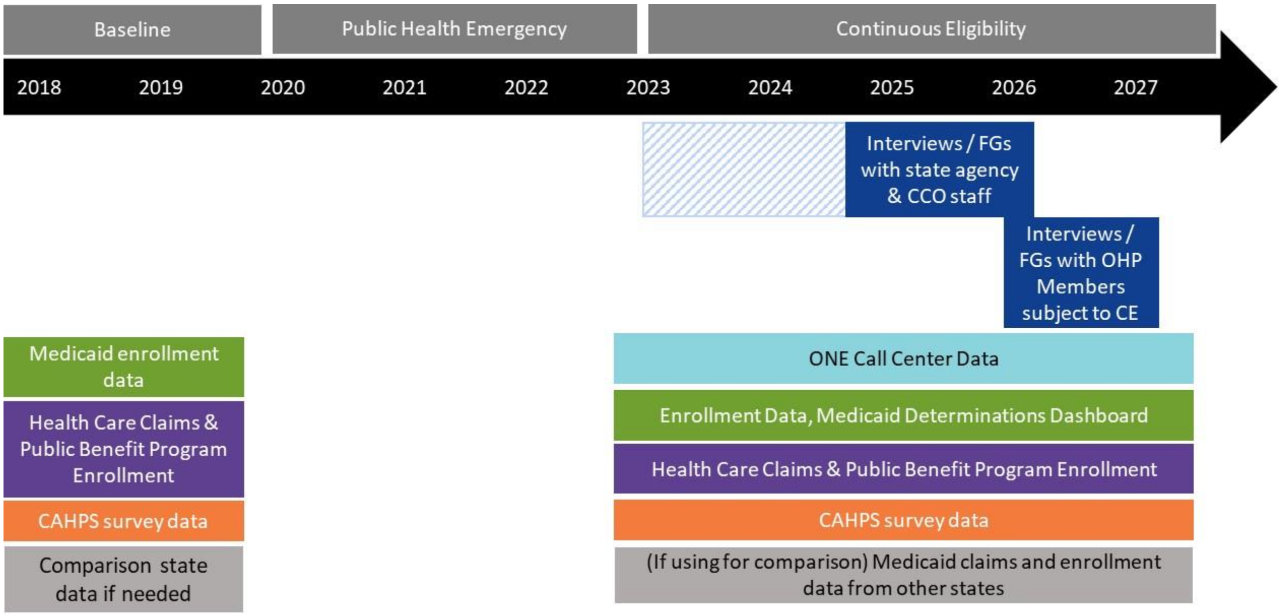
Evaluation period

The CE policy went into effect July 1, 2023, and was applied retroactively to all individuals who underwent OHP renewal as part of the “unwinding” of the public health emergency beginning on April 1, 2023. The TME policy covers the “unwinding” period of continuous enrollment under the COVID-19 public health emergency – which in Oregon began in summer 2023 – until the establishment of OHP Bridge anticipated July 1, 2024. In Figures 2.2 and 2.3, we depict the timing of data collection for CE/TME questions during the evaluation period. The figure shows the timing of actual data collection in solid colors and the period which data will cover in striped colors.

CE policy evaluation period (Figure 2.2). The evaluation period for the CE policy will begin in 2023, with the implementation of the policy, and end in 2027 when the demonstration period concludes. An additional 18 months beyond the demonstration period will be used for analysis and dissemination. In Figure 2.2, we depict the timing of data collection for the CE policy during the evaluation period. The figure shows the timing of actual data collection in solid colors and the period which data will cover in striped colors.

- **Interviews/focus groups with OHA, ODHS, AAA, CCO, and ONE Customer Service Center staff**. The Implementation Question relies on interview and focus group data. Interviews / focus groups with OHA (including CPOP teams), ODHS, AAA, ONE Customer Service Center staff, and CCO staff will be conducted in 2025-2026, with interviewees or focus group members being asked to reflect on their current and prior experiences with implementation going back to 2023.
- **Interviews/focus groups with OHP Members subject to CE.** Member experience with the CE policy will be assessed via interviews or focus groups in 2026 and 2027.
- **Administrative data**. Administrative data, including ONE Customer Service Center data, enrollment data (from the ONE Eligibility system), Medicaid determination dashboards, health care claims, and public benefit program enrollment data will be collected for the entire demonstration period from 2023-2027.
- **Survey data**. Some measures of access to care can be obtained via the CAHPS survey, which is fielded annually to OHP members. CAHPS data will be acquired for the entire demonstration period from 2023-2027.
- **Pre-period data for comparison.** For evaluation questions that rely on pre-period data for comparison, the pre-period will cover 2018 and 2019, but will not include the years 2020 to 2022 to exclude the COVID-19 pandemic because of the unusual patterns of care observed during that time.

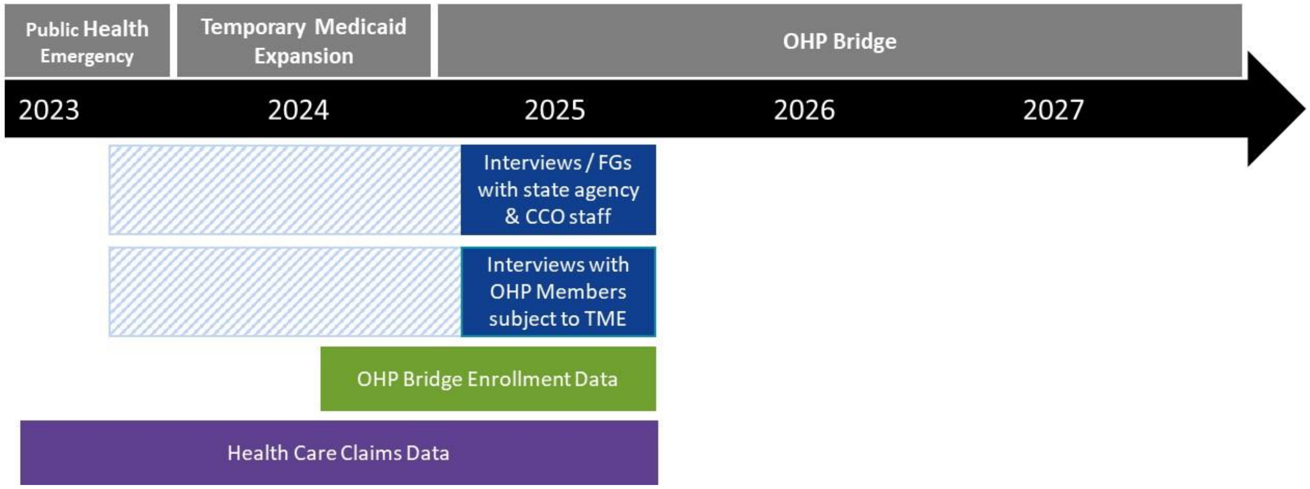
Figure 2.2. CE policy evaluation period



TME policy evaluation period (Figure 2.3). The evaluation period for the TME policy will begin in summer 2023 when eligible OHP members covered under the COVID-19 public health emergency automatically had their coverage continued under the TME policy and will end one year after implementation of OHP Bridge (current plans are for OHP Bridge to launch July 1, 2024, so the evaluation period would conclude in the summer of 2025). Analysis and reporting will continue for an additional year. In Figure 2.3, we depict the timing of data collection for the TME policy during the evaluation period. The figure shows the timing of actual data collection in solid colors and the period which data will cover in striped colors.

- **Interviews/focus groups with OHA, ODHS, AAA, CCO, and ONE Customer Service Center staff.** Interviews or focus groups to understand TME implementation will be conducted in 2024 and 2025, with interviewees or focus group members being asked to reflect on their current and prior experiences with implementation going back to 2023.
- **Interviews/focus groups with OHP members subject to TME.** Member experience with the TME policy will be assessed via interviews once at the beginning of the evaluation, to capture information as soon as possible after the unwinding of the public health emergency in summer 2023 and the implementation of OHP Bridge in July 1, 2024.
- **Enrollment and claims data.** Finally, health care enrollment and claims data will be collected across 2023 through 2025 to understand continuity of Medicaid coverage, continuity of care, and health care utilization.

Figure 2.3. TME policy evaluation period



Focus and comparison populations

The CE policy applies to all OHP members – with the exception of those who are receiving OHP-covered home and community-based services in order to prevent institutionalization. The policy differs across two age categories: children under 6 years of age, and people 6 years of age and older. An estimated 1.4 million people will be impacted by the CE policy.

The TME policy focuses on OHP members 18 – 64 years of age who earn 133-200% FPL. Under this policy, an estimated 55,000 people will remain eligible for Medicaid until the implementation of OHP Bridge on July 1, 2024.

A variety of different populations will be engaged to understand the implementation and outcomes for each policy, including staff responsible for implementing the new policy and OHP members. The population focus and size may vary based on the specific data being captured to address each research question. Below we provide a breakdown of these populations, including potential comparison populations where appropriate, by research question.

CE and TME implementation question 1. How are the CE and TME policies being implemented? The study population for this question includes interviews / focus groups with staff responsible for implementing the policies (including OHA, ODHS, AAA, ONE Customer Service Center, and CCO staff). It further includes interviews or focus groups with OHP members.

- **OHA/ODHS/AAA staff.** The independent evaluator will collaborate with OHA and ODHS to identify staff most appropriate for interviews or focus groups around implementation of the policies and burden related to renewals. These staff will likely include a combination of those who are involved in technical and logistical aspects of implementation, staff who conduct outreach and education about Medicaid benefits, staff who work at the ONE Customer Service Center or local eligibility offices, and/or staff who process redeterminations. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 40 interviews to support reaching saturation.

- **CCO staff.** The independent evaluator will collaborate with OHA staff, including the Innovator Agent assigned to each CCO, to identify relevant roles and/or individuals at CCOs for interviews. CCO representatives participating in specific OHA contractor workgroups, such as the CCO Operations Collaborative and the CCO Member Engagement and Outreach Committee, may be an appropriate starting point for recruitment. CCO Tribal Liaisons and Traditional Health Worker Liaisons may be able to provide specific information about implementation work with priority populations. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but, given that there are 16 CCOs in Oregon, we recommend at least 32 interviews to support reaching saturation.

- **CE OHP members.** The independent evaluator will collaborate with OHA to identify adult OHP members and parents of child OHP members subject to the CE policy to participate in interviews or focus groups. Interviewees will be recruited and selected to ensure representation across different demographics and geographies, including different CCO regions. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 40 interviews to support reaching saturation.

CE and TME research hypothesis 1. The CE and TME policies will improve the experience of enrollment in Medicaid for OHP members. The study population for this hypothesis includes adult OHP members who call the ONE Customer Service Center and a selection of OHP members covered under the CE and TME policies to engage in interviews or focus groups.

- **OHP members who call the ONE Customer Service Center**. OHP members can call the ONE Customer Service Center with questions about eligibility, general support needed, or to request technical assistance with the application portal. The Service Center receives between approximately 3,000 and 8,000 calls per day. As calling the line is voluntary, this is considered a convenience sample.
- **OHP members subject to the CE policy**. Described above under CE and TME implementation question 1.
- **OHP members subject to the TME policy**. The independent evaluator will collaborate with OHA to identify OHP members covered under TME to participate in interviews. Interviewees will be recruited and selected to ensure representation across different demographics as well as different program experiences (such as individuals who ended up enrolled in OHP Bridge and those who did not). The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 20 to 40 interviews to support reaching saturation.

CE and TME research hypothesis 2. The CE and TME policies will increase enrollment, improve continuity of Medicaid coverage, and reduce churn; and will decrease inequities in all these outcomes. For this hypothesis, the study population would include all OHP members subject to the CE policy or covered under the TME policy, although specific questions and outcomes will have additional eligibility criteria for inclusion.

- **All OHP members.** For outcomes derived from administrative data (e.g. Medicaid enrollment and redetermination dashboards), the only eligibility criterion for the evaluation is that the individual be enrolled in Medicaid and subject to either the CE or TME policy. However, for outcomes related to churn and continuous enrollment, inclusion in the study sample will also require that the covered Medicaid member is older than 6 years of age at some point during the evaluation period. This is because Medicaid members who remain under 6 years of age for the duration of the evaluation period would be continuously enrolled in Medicaid, so churn and continuous coverage cannot be evaluated during the demonstration period.
- **Comparison groups.** While most of the analysis for this hypothesis does not require a comparison group, we propose two potential comparisons for the churn analysis. The addition of a comparison group allows the analysis to control for secular trends in health care coverage and provides stronger evidence when determining the impacts of the CE policy on churn. The independent evaluator will decide the best course of action for selecting a comparison group based on the limitations and data accessibility of each group. The two potential comparison groups we propose include:
    - Individuals enrolled in Medicaid in other states without a CE policy. We anticipate these to include all states in the West region that have not implemented CE: Alaska, Arizona, Idaho, Montana, Nevada, Utah and Wyoming. This may additionally include California, Colorado, and Hawaii, depending on the outcome of these states' currently planned or pending 1115 waivers. The independent evaluator will continue to monitor pending and new waiver applications to ensure an appropriate group of regional comparison states. It is important to note, however, that other policy differences between states may still impact the comparability of Medicaid enrollees across states; this could be somewhat mitigated through analytic designs such as a difference-in-differences analysis.
    - Individuals enrolled in Medicaid in Oregon, 2018 – 2019. If the independent evaluator cannot find appropriate states from which comparison populations can be pulled, it would also be possible to create a comparison group from individuals enrolled in Medicaid in Oregon before the implementation of the current 1115 waiver demonstration. Given the drastic changes in health care access and use caused by the COVID-19 pandemic, as well as the policy changes to Medicaid coverage that were implemented in response to the pandemic, 2020

through 2022 would not serve as an appropriate period; therefore, pre-period data would need to come from 2019 or earlier. This comparison group would still be subject to concerns about the impact of secular trends due to changes in health care delivery and other policies during the intervening years; this could be somewhat mitigated through methods such as adjusting for health care utilization patterns at baseline.

CE and TME research hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality for OHP members; and will decrease inequities in all these outcomes. For this hypothesis, the study population would include all OHP members subject to either the CE or TME policies, although specific questions and outcomes will have additional eligibility criteria for inclusion. Potential comparison groups are also described.

- **All OHP members.** For outcomes derived from Medicaid claims data, the only eligibility criteria for the evaluation is that the individual be enrolled in Medicaid and subject to either the CE or TME policy. However, there will be additional eligibility criteria for outcomes related to receipt of specific types of care. For example, an analysis of adherence to mammography screening guidelines would be limited to women ages 50 to 74 enrolled in Medicaid for 2 years to align with National Committee for Quality Assurance guidelines, while an analysis of topical fluoride varnish for children would be limited to children ages 1 to 21 years enrolled in Medicaid for at least 12 months to align with Dental Quality Alliance (DQA) guidelines.

- **CAHPS survey respondents.** OHP members who responded to the CAHPS survey within the study window will be included in the analysis. Based on previous CAHPS response rates, we anticipate 13,000/year responses from OHP members.
- **Comparison groups.** Similar to the churn analysis in CE and TME research hypothesis 2, the addition of a comparison group in this hypothesis allows the analysis to control for secular trends in health care utilization and provides stronger evidence when determining the impacts of the CE policy. We propose the same two potential comparison groups from hypothesis 2 for the measures in this hypothesis that rely on Medicaid claims data. The independent evaluator will decide the best course of action for selecting a comparison group based on the limitations and data accessibility of each group, defined below:
  - Individuals enrolled in Medicaid in other states in the West region without a CE policy.
  - Individuals enrolled in Medicaid in Oregon, 2018 – 2019.

CE and TME research hypothesis 4. The CE policy will improve access overall, and decrease inequities in access, to other public benefits for OHP members. For this hypothesis, we will include OHP members who are also eligible for other benefits as well as parents/legal guardians of children who are OHP members.

- **OHP members enrolled in other public benefits.** The population included in this analysis will be households with at least one member who is an OHP member enrolled in SNAP, WIC or TANF. Based on 2022 data, we estimate that the sample size for this population would be between roughly 100,000 individuals enrolled in both OHP and approximately 815,000 individuals enrolled in both SNAP and Medicaid (18).

Measures

The tables below list the descriptions and data sources for proposed measures to be included in the evaluation. In addition to these measures, the independent evaluator will collect or obtain information on a variety of demographic, geographic, and health-related characteristics, as well as lived experiences of OHP members.

The independent evaluator will provide measure specifications in the interim and summative reports for each quantitative measure used: this will include numerator and denominator definitions.

CE and TME implementation question 1. How are the CE and TME policies being implemented? Measures for the evaluation of the implementation of the CE and TME policies will come from interviews or focus groups.

Data source	Measure
Interviews or focus groups w/ OHA, ODHS, AAA, ONE Customer Service Center, CPOP, and CCO staff	***Interview domains*** ▶ Any deviations from the original implementation plan, and the reason for these deviations ▶ Outreach, engagement, communication efforts to OHP members, community partners, and other government agencies around CE and TME benefits ▶ Challenges and barriers encountered, and how they were overcome or not ▶ Facilitating factors and successes ▶ Experience with the redetermination process, including ex parte renewals
Interviews or focus groups with OHP members subject to CE policy	▶ Understanding of CE benefits

CE and TME research hypothesis 1. The CE and TME policies will improve the experience of enrollment in Medicaid for OHP members. Information on OHP members' experience with the CE and TME policies will be derived from three sources: administrative data collected for the ONE Customer Service Center; interviews or focus groups with OHP members subject to the CE policy; and interviews or focus groups with OHP members covered under TME.

Data source	Measure

ONE Customer Service Center	***Measures from administrative data*** ▶ Total ONE Customer Service Center call volume ▶ Proportion of ONE Customer Service Center calls abandoned (i.e. a caller hangs up after having been on hold and before their call is answered), aggregated to per week. ▶ Average length of wait time for accepted ONE Customer Service Center calls, aggregated to per week. ***Measures from short survey given at the end of each call*** ▶ Overall satisfaction with service received, rated on a scale from 1 to 4 and aggregated to per week. ▶ Oregon Department of Human Services employees' level of helpfulness, courtesy, and respect, rated on a scale from 1 to 5 and aggregated to per week. ▶ Oregon Department of Human Services employees' ability to answer questions, rated on a scale from 1 to 5 and aggregated to per week
Interviews or focus groups with OHP members subject to the CE policy	▶ Member experience with renewing enrollment ▶ Barriers and facilitators to enrollment ▶ Member satisfaction with continuous enrollment benefits
Interviews or focus groups with OHP members subject to the TME policy	▶ Experience enrolling in OHP under TME and OHP Bridge ▶ Barriers and facilitators to enrollment

CE and TME research hypothesis 2. The CE and TME policies will increase enrollment, improve continuity of Medicaid coverage, and reduce churn, and will decrease inequities in all these outcomes. Measures of enrollment, health care coverage continuity, and churn will come from three data sources: the Oregon Medicaid Redeterminations Dashboard, the ONE Eligibility system, and Medicaid enrollment data.

Data source	**Measure**
Oregon Medical Redetermination Dashboard	▶ *Renewal rates.* calculated as the total number of renewals completed for OHP members per calendar year.
ONE Eligibility system	▶ *Ex parte renewal rates.* calculated as the total number of ex parte renewals completed for OHP members per calendar year ▶ *Automatic OHP Bridge enrollment.* calculated as the total number of OHP members covered under the TME policy who are automatically enrolled in OHP Bridge

Medicaid Enrollment Data (and REALD SOGI data repository)	▶ *Medicaid enrollment.* calculated as the total number of enrollees in Medicaid per calendar year. ▶ *Rates of gaps in Medicaid coverage.* Proportion of all Medicaid enrollees who experience a gap in Medicaid coverage; that is, they do not renew on time, but then re-enroll in Medicaid within 6 months of disenrolling (i.e., churn). ▶ *Length of gaps in Medicaid coverage.* Among Medicaid enrollees who experience churn, the average length of time before re-enrolling**.** ▶ *Length of continuous Medicaid coverage.* Average duration of continuous enrollment in Medicaid. ▶ *OHP Bridge enrollment.* calculated as the number of individuals enrolled in Medicaid under the TME policy component who enroll in OHP Bridge with no gap in health care coverage.

CE and TME research hypothesis 3. The CE and TME policies will improve health care access, utilization, and quality for OHP members and will decrease inequities in all these outcomes. The specific health care outcome measures used in this evaluation will be finalized by the independent evaluator, in collaboration with OHA and CMS. Measures will be selected from nationally recognized measure sets and will emphasize inequities-sensitive outcomes. We propose considering the following measures for each topic area as a starting point:

Data source	Measure
Medicaid claims (and Medicare claims for dual eligibles; and REALD SOGI data repository)	***Measures of preventive and primary care, including continuity of care*** ▶ Continuity of care ○ *Continuity of Primary Care for Children with Medical Complexity.* Measure steward: Seattle Children's Research Institute. ○ *Provider Level Continuity of Care Measure*. Measure steward: American Board of Family Medicine ○ *Bice-Boxerman Continuity of Care Index.* Bice TW, Boxerman SB. A quantitative measure of continuity of care. Med Care. 1977 Apr;15(4):347-9 ▶ *Child and Adolescent Well-Care Visits.* Primary Access and Preventive Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid Children's Health Insurance Program (CHIP). Measure steward: National Committee for Quality Assurance. ▶ *Childhood Immunization Status.* Primary Access and Preventive Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: National Committee for Quality Assurance.

- *Developmental Screening in the First Three Years of Life.* Primary Access and Preventive Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: Oregon Health and Science University.
- *Breast Cancer Screening.* Primary Access and Preventive Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Cervical Cancer Screening.* Primary Access and Preventive Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Colorectal Cancer Screening.* Primary Access and Preventive Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Prenatal and Postpartum Care – Age 21 and Older.* Maternal and Perinatal Health measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Contraceptive Care – All Women Ages 21 to 44.* Maternal and Perinatal Health measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: Office of Population Affairs.

Measures of acute care

- *Emergency Department Visits.* Measure Steward: National Committee for Quality Assurance
- *Non-Emergent Emergency Department Visits.* Measure Steward: California Department of Health Care Services Medi-Cal Managed Care Division.
- *Acute Hospitalization.* Measure Steward: National Committee for Quality Assurance
- Hospitalizations for ambulatory care sensitive conditions
    - *Prevention Quality Indicators (Adults).* Measure Steward: Agency for Health Care Research and Quality
    - *Pediatric Quality Indicators (Children).* Measure Steward: Agency for Health Care Research and Quality
- *Hospital All-Cause Readmissions.* Care of Acute and Chronic Conditions measure from the 2024 Core set of Adult Health Care Quality

Measures for Medicaid. Measure steward: National Committee for Quality Assurance.

Measures of behavioral health care

- *Follow-up Care for Children Prescribed Attention Deficit/Hyperactivity Disorder Medication.* BH Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: National Committee for Quality Assurance.
- *Antidepressant Medicaid Management.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Follow-Up after Hospitalization for Mental Illness – Age 18 and Older.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Follow-Up After Emergency Department Visit for Mental Illness – Age 18 and Older.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Adherence to Antipsychotic Medications for Individuals with Schizophrenia.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Social-Emotional Health.* CCO incentive measure. Measure steward: Oregon Health Authority.
- *Utilization of Intensive In-Home BH Treatment Programs – Age 20 and younger.*

Measures of dental health care

- *Any dental service*. Measure steward: DQA.
- *Preventive dental services*. Measure steward: DQA.
- *Oral Evaluation, Dental Services.* Dental and Oral Health Services measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: DQA.
- *Sealant Receipt of Permanent First Molars.* Dental and Oral Health Services measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: DQA.
- *Topical Fluoride for Children.* Dental and Oral Health Services measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: DQA.

	▶ *Oral Evaluation During Pregnancy.* Measure steward: DQA. ▶ *Utilization of Services During Pregnancy.* Measure steward: DQA.
CAHPS	***Measures of preventive and primary care*** ▶ *Access to care.* Consumer Assessment of Healthcare Providers and Systems Health Care Access module. Measure steward: Agency for Health Care Research and Quality.

CE and TME research hypothesis 4. The CE policy will improve connection overall and decrease inequities in connection to other public benefits for OHP members. Information on connection to non-health care public benefit programs will be derived from the ONE Eligibility system or the Integrated Client Services database.

Data source	Measure
ONE Eligibility System or the Oregon Integrated Client Services Database	▶ *Enrollment in SNAP.* The percent of all OHP members whose household is enrolled in SNAP benefits in a given calendar year. ▶ *Enrollment in WIC***.** The percent of OHP members whose household is enrolled in WIC in a given calendar year. ▶ *Enrollment in TANF.* The percent of OHP members whose household is enrolled in TANF in a given calendar year. ▶ *Enrollment in ERDC.* The percent of all OHP members whose household is enrolled in ERDC. ▶ *Churn in public benefit programs.* The percent of OHP members enrolled in the above public benefit programs who have a 3-month or less gap in enrollment in that program in a given calendar year.

Data sources

This section describes the primary and secondary data sources needed for the CE and TME evaluation.

Primary data collection

Interviews/focus groups. Interviews or focus groups will be conducted with two distinct groups at the beginning of the evaluation: staff implementing the CE and TME policy (i.e., OHA/ODHS/AAA staff, CCO staff, and ONE Customer Service Call Center staff); and OHP members. The independent evaluator will determine the key elements of each of these qualitative data collections efforts, including selecting the number of and sampling frame for interviewees or focus group members (following the suggestions for both in earlier sections), designing the interview or focus group guide to reflect the evaluation questions of interest, providing for translation/transcreation and contracting with interpreters, and setting the location and timing of each interview or focus group.

Secondary data

Most data for this evaluation of the CE and TME policies will come from existing data sources. The following section provides a brief description of each data source, categorized by the type of information the data source provides. See Attachment 4 (Secondary data source descriptions) for further information on these data sources.

Member experience with enrollment. The ONE Customer Service Center Dashboard is an interactive tool that offers information on the customer service experience for callers to the ONE Customer Service Center, a resource for individuals in Oregon to apply for or get help with medical, food, cash, and child care benefits by phone. It provides daily updates on call volume, wait times, accepted calls, abandoned calls, and average customer service score (1 being the lowest and 4 being the highest).

Medicaid enrollment and health care utilization data. Information on Medicaid enrollment and health care utilization can come from a variety of data sources. Enrollment information can be found in the Oregon Medicaid Redeterminations Dashboard, the Oregon ONE Eligibility system, Oregon Medicaid Management Information System (MMIS) and the Oregon All Payers All Claims Database (APAC). Health care utilization information can be found in MMIS and APAC.

- *Oregon Medical Redeterminations Dashboard*. The Oregon Medical Redetermination Dashboard is a publicly available dashboard that provides aggregated data on the redetermination process for Medicaid enrollees in Oregon. It includes reason for termination for individuals who do not renew and disaggregation for different enrollee characteristics.
- *Oregon ONE Eligibility System.* The Oregon ONE Eligibility system is a platform that simplifies the application process for Oregon residents seeking medical, food, cash, and childcare benefits. The ONE Eligibility system gathers various information about the applicant, including demographic information, household income, current benefits, household composition, disability and activities of daily living, and data on current and past insurance coverage.
- *Oregon All Payers All Claims Database*. The APAC database is a comprehensive database that collects and stores administrative health care data from various sources, including commercial health plans, licensed third-party administrators, pharmacy benefit managers, Medicaid, and Medicare. Established in 2009, the database contains information on insurance coverage, health service cost, and utilization for Oregon's insured populations. Medicare Fee-for-Service claims are in APAC but are not available for independent, external data requestors, so APAC data will reflect Medicare Advantage enrollees only.

- *Oregon Medicaid Management Information System (MMIS)*. MMIS is a comprehensive database that contains detailed, timely, year-over-year data about Medicaid enrollees and the health care services paid by Medicaid.

OHP member surveys. To supplement administrative sources, surveys fielded directly to OHP members can provide valuable information on member experiences, health status, health-related social needs (HRSN), and gaps in coverage and benefits. The Consumer Assessment of Healthcare Providers and Systems Survey is a standardized and publicly reported survey designed to measure patients' perspectives of health care services delivered in various settings. OHA administers the CAHPS survey annually to members of each CCO in Oregon, as well as the fee-for-service (FFS) population.

Enrollment in other public benefit programs. We propose two main databases for information in other public benefit programs such as SNAP, WIC, ERDC, and TANF: the ONE Eligibility system and the Integrated Client Services Database.

- *ONE Eligibility system*. See description above.
- *Integrated Client Services Database (ICS).* ICS is a system that consolidates and stores risk, service utilization, expenditure, and outcome data for individuals who are served by ODHS.

Medicaid data from other states. Medicaid data from other states will likely come from the *CMS T-MSIS Analytic File (TAF)*. The T-MSIS initiative was developed to provide state Medicaid and CHIP programs with more comprehensive and robust data files and data elements. The TAF includes demographic and eligibility information for all Medicaid and CHIP members, as well as claims data on service use and payments. The independent evaluator currently has TAF files from 2017-2020 in-house; data from 2025 are anticipated to be available in November 2027, allowing for analyses through approximately the first 3 years of the demonstration.

Analytic methods

This section describes the qualitative and quantitative analytic methods for the CE and TME evaluation.

Qualitative analysis

The independent evaluator will be responsible for solidifying the qualitative analysis approach used in this evaluation. However, we anticipate the following steps: creating structured interview or focus group guides that cover key topics of interest; translating guides into multiple languages as needed; assessing the validity of the guides through cognitive interviews with individuals selected from the study population; transcribing and coding all interviews or focus groups, with double-coding for accuracy; and using thematic analysis to organize codes into categories, examine patterns, and transform them into themes.

Quantitative analysis

The following quantitative analysis techniques will be used to answer the listed evaluation questions.

Descriptive statistics. All implementation and evaluation questions that require quantitative analysis will begin with descriptive statistics, for example: means, medians, or percentages; or measures of distribution and spread, such as the interquartile range. For some questions, descriptive statistics may be the most appropriate quantitative analytic technique, and therefore the only ones used. However, most implementation and evaluation questions using quantitative techniques will additionally rely on the following list of inferential statistics.

Trends over time. The evaluation questions that look at trends over time focus only on the period after the implementation of CE and TME; that is, they do not include pre-period data in the analysis. The two possible analyses are a pooled cross-section analysis, which compares cross-sections of the study population at different points in time, and a time series analysis of panel data, which follows the same individuals over time. Given that we expect individuals in the study population to change over time, the pooled cross-section analysis is likely most appropriate. Implementation and evaluation questions that use trends over time include:

- **CE and TME evaluation question 1a.** What is the experience of the CE policy for OHP members, including what impact it has on the burden (e.g., time and stress) related to renewals?
- **CE and TME evaluation question 2a.** How does the CE policy impact enrollment and renewal rates?
- **CE and TME evaluation question 2b**. How does the CE policy impact rates of churn?
- **CE and TME evaluation question 2c.** How long are individuals enrolled under CE?
- **CE and TME evaluation question 4a.** How does the CE policy impact connection to non-health care public benefit programs?

Analysis using comparison groups. Quantitative analytic techniques that use comparison groups provide stronger evidence when determining the impacts of the CE and TME policies by helping to control for secular trends that would otherwise obscure results. Proposed techniques include:

- *Multivariable regression.* The first potential comparison population, Medicaid enrollees in other states, requires the use of multivariable regression models. Regression models will provide estimates of the differences in health care outcomes between Oregon and control states and can be adjusted for key covariates that may differ between the states including differences in population demographics.
- *Pre-post comparisons.* The second of the two potential comparison populations, Oregon OHP members from 2018 and 2019, requires the use of a pre-post comparison. This can be done through tests of means or proportions comparing summary statistics from the pre-period to summary statistics from the period post-implementation. It can also be done using the pooled cross-section analysis approach, with each year of the post-implementation period being compared to the pre-period.
- *ITS.* Where there is enough pre-implementation data available, some evaluation questions may benefit from an ITS, which uses repeated cross-sections before and after

the evaluation to allow for a thorough examination of the immediate and sustained effects of the CE policy. However, explicitly modelling trends can introduce its own bias, particularly if the pre-periods were noisy, which may be true with the disruptions created by the COVID-19 pandemic. The independent evaluator will therefore visually examine trends and use an ITS where appropriate.

- *DiD analysis.* Where it is possible to obtain both Oregon pre-period Medicaid claims and Medicaid data from other states, some evaluation questions may be able to use a DiD design. This analysis design provides three estimates: the expected background change in health care utilization over time absent the CE and TME policies, as represented by the change in health care utilization over time for the control state; the baseline (e.g. before the implementation of the CE and TME policies) difference in health care utilization between Oregon and the control states; and the change over time in health care utilization between Oregon and the control states. It is this last estimate that allows for assessing the impact of the CE and TME policies on health care outcomes.

  The main assumption unique to the DiD model is that of parallel trends in the outcome at baseline. Because there is no statistical test for this assumption, it is often assessed by plotting the health care utilization patterns for the intervention and control states during the pre-period and visually comparing the trends between the two groups. Attempts to weight or match populations can introduce bias under a DiD approach; it is therefore not recommended to use these techniques in this analysis. However, models will likely be adjusted for year, quarter, state, county of residence, urban/rural geography, age, sex, and potentially chronic conditions.

Implementation and evaluation questions that may use analytic techniques involving comparison groups include:

- **CE and TME evaluation question 2a.** How does the CE policy impact enrollment and renewal rates?
- **CE and TME evaluation question 2b.** How does the CE policy impact rates of churn?
- **CE and TME evaluation question 2c.** How long are individuals enrolled under CE?
- **CE and TME evaluation question 3a.** How do the CE and TME policies impact access to and use of preventive and primary care, including continuity of care?
- **CE and TME evaluation question 3b.** How do the CE and TME policies impact use of acute and costly care, especially potentially preventable emergency department visits and hospitalizations?
- **CE and TME evaluation question 3c.** How do the CE and TME policies impact access to and use of behavioral health care?
- **CE and TME evaluation question 3d.** How do the CE and TME policies impact access to and use of oral health care?

Comparative statistics for group differences. For evaluation questions assessing the impact of the CE and TME policy components on inequities among groups currently and/or historically excluded from coverage and health care, differences between groups can be assessed by tests of means or proportions or the inclusion of interaction terms in regression models.

Potential additional analyses: Regression Discontinuity Design (RDD). An additional analysis that may be useful is an RDD, which leverages policy differences on either side of an eligibility threshold in order to assess the impact of the policy. Given that children are enrolled continuously until their sixth birthday, at which point continuous enrollment changes to 24 months, the RDD can be used to understand the impact of the longer enrollment time by comparing outcomes for children aged 5 years and younger with children aged 6 years and older. This would mainly be applicable to outcomes that are essentially the same for young children on either side of the 6 year old threshold, and would exclude outcomes relevant to children on only one side of the threshold (e.g. Developmental Screening in the First Three Years of Life) or outcomes expected to have different patterns for different age groups.

The independent evaluator will explore this further to determine if and where an RDD may add value.

Methodological limitations

Methodological limitations inherent in this evaluation design include concerns about the validity of the statistical comparisons, particularly given the confounding impact of other policies that affect Medicaid coverage or access to and utilization of care (e.g. extension of post-partum Medicaid coverage, increases in reimbursement rates for primary care and behavioral health services, and changes to Early and Periodic Screening, Diagnostic [EPSDT], and Treatment benefits); and known equity concerns in design, available data, and analytic techniques.

Analytic concerns

Some of the evaluation questions can be answered purely descriptively, but several, including those focused on health care coverage and outcomes, require a statistical comparison to make inferences about the impact of the TME and CE policies. However, there are challenges with the use of either comparisons to the pre-period or to other states. The period immediately prior to the TME and CE policy implementation covers the COVID-19 pandemic. During the pandemic, Medicaid coverage was extended to individuals earning up to 200% FPL; this period is therefore no different than the TME period in terms of coverage eligibility. Likewise, redeterminations were paused during the pandemic, effectively providing continuous coverage to all OHP members for the duration of the public health emergency. In addition to this, there were known changes to health care utilization during this time, resulting from changes in both health care seeking behavior and decreased access to care, further limiting comparability. It is therefore necessary to limit a pre-period comparison to 2019 or earlier; however, having this large of a gap between the intervention period and the pre-period introduces other opportunities for bias due to secular trends in health care utilization and changes to public policies that may have impacted use of care.

A comparison to OHP members in other states avoids some of the limitations inherent in a pre-post comparison but introduces its own unique threats to internal validity. Other states may vary substantially from Oregon in critical ways; some of these, such as differences in population demographics, can be adjusted for in a multivariable model; others, such as differences to the policy and cultural environment, are not as easily measured and therefore cannot be included in the model.

Combining pre-period data and information from other states into a DiD analysis is the best approach to mitigating these limitations. There is also a substantial body of literature on the impacts of increased health care coverage and continuity of coverage, and this previous research can be used to provide additional context and benchmarks for interpreting results.

There are known equity limitations to most of the proposed existing data sources. For example, several of the hypotheses have specific evaluation questions about the impact of the CE and TME policies on inequities – including by various demographics groups – on health care coverage and use. However, health care enrollment and utilization data, which is critical to answering these questions, can have moderate to high levels of missing data for demographic information. Oregon has committed to addressing this issue by improving collection of race, ethnicity, language, and disability (REALD) information. These efforts are expected to reduce the rate of unknown or missing race and ethnicity substantially but data for pre-demonstration comparison periods, if used, may not be as complete.

Chapter 3. Health-related social needs

Health-related social needs background

Oregon’s 1115(a) Medicaid Demonstration Waiver (i.e., the “demonstration”) is intended to expand on advancements attained through previous demonstration efforts, with a specific focus on meaningful progress toward health equity. Health-related social needs (HRSN), such as housing and built environment, access to healthy food, and others, have major effects on a person’s health outcomes and are root causes of health inequities (19–22). In addition, HRSN gaps disproportionately impact populations most harmed by historical and contemporary injustices, including people of color in Oregon. Thus, addressing HRSN is a priority for reducing health inequity and improving health.

As part of this demonstration, Oregon will develop, fund, and implement a defined set of HRSN services to support a subset of Oregon Health Plan (OHP) members. HRSN services included in the demonstration cover housing supports, nutrition supports, and the provision of climate devices, as well as HRSN outreach and engagement. The demonstration authorizes HRSN services for eligible populations facing critical life transitions. These transitional periods are important because they create high risk for disengagement from the health care system and can disrupt access to medical care and supportive services. HRSN-eligible transition populations include:

- Individuals who are experiencing homelessness or at risk of losing housing
- Members transitioning from Medicaid-only coverage to dual Medicaid-Medicare coverage within the past 90 days or in the next 270 days
- Adults and youth exiting carceral settings in the past 365 days
- Adults and youth who have been discharged from an Institution for Mental Diseases (IMD), a mental health and substance use disorder residential facility, or inpatient psychiatric unit within the last 365 days
- Young adults with special health care needs (YSHCN) ages 19 through 25
- Individuals with a lifetime involvement in Oregon child welfare

In addition to belonging to one of the above transition populations, HRSN services have other varying additional clinical and social risk criteria, depending on the benefit. However, the state does not require a single standardized HRSN screening tool. Rather, entities recommending individuals receive HRSN services may use a template or tool of their choosing. This decision was intended to reduce barriers to screening and align with existing process flows and tools that capture required information, in order to enhance access to HRSN services.

Organizations and roles involved in the provision of HRSN benefits include HRSN service providers and vendors (i.e., organizations that deliver or provide climate, nutrition, housing, or outreach services), care coordinators (i.e., individuals who support OHP members either through their CCO or through the Oregon Health Authority (OHA) for Open Card members), and HRSN connectors (i.e., community-based individuals and organizations that connect OHP members to services). HRSN service providers are receiving a significant, first-of-its-kind infrastructure investment via Oregon's DSHP program to support the delivery of HRSN services, in the form of the Community Capacity Building Fund (CCBF) grant program. CCBF grants are being or will be awarded by CCOs to their local partners and by OHA to Oregon's Nine Federally Recognized Tribes.

Goals and evidence for housing supports. To help beneficiaries who meet HRSN-specific eligibility criteria maintain stable housing, the state will provide rental assistance or temporary housing, utility costs, pre-tenancy and housing transition navigation assistance, tenancy sustaining services, and one time transition and moving costs such as housing deposits, relocation services, and basic household goods and furniture. The ultimate goal of providing housing support is to improve health outcomes and reduce inequities among OHP members. A large body of literature establishes the connection between housing and health. Eviction has been associated with greater Medicaid churn (23), and housing instability can lead to poor health outcomes (24–26) and more health encounters, including increased emergency department visits (27,28). Receiving housing has been shown to have many positive impacts including increasing access to preventive care and reducing use of the emergency department (29–31). In addition, access to housing is impacted by historical and contemporary injustices, including structural oppression and institutional racism. In Oregon, people who are Black, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, or two or more races are disproportionately more likely to be unhoused (32).

Goals and evidence for nutrition supports. This HRSN-related focus area is designed to increase beneficiary food stability through services including nutrition education, assessments for and provision of medically tailored meals, pantry stocking, and fruit and vegetable prescriptions. Studies have shown that food insecurity is associated with poor physical health and an increased number of chronic conditions (33), and is a risk factor for depression, stress, and anxiety (34). Food instability can also contribute to poor medication adherence (35) and postponed medical care (27,36). Related initiatives addressing food insecurity, such as the Supplemental Nutrition Assistance Program (SNAP) and food prescription services, have been shown to reduce food insecurity (37,38) and affect health outcomes (37,39,40). Again, structural racism has created racial inequities in food insecurity rates; a greater proportion of Black, Hispanic, and American Indian and Alaska Native households are food insecure compared to White households. Additionally, households with work-limiting disabilities are more likely to be food insecure (41).

Goals and evidence for climate supports. The demonstration aims to provide climate-related devices to help protect beneficiaries from the harmful effects of extreme heat or cold events, pollution, etc. These devices include medically necessary air conditioners, heaters, air filtration devices, portable power supplies, and mini refrigeration units. Climate devices will be provided for individuals in an HRSN-covered population who have at least one of the HRSN climate device-specific clinical risk factors and require a climate device to treat, ameliorate, or prevent their health condition (i.e. meet the HRSN social risk factor requirement). Additionally, there are eligibility conditions around the ability to use the device safely and not having received the same services from other local, state, or federally-funded programs. Climate emergencies or events can have serious effects on physical and mental health (42,43), and certain groups have health conditions and living situations that place them at higher risk for morbidity and mortality (44,45). In recent years, Oregon has experienced wildfires, ice storms, extreme heat waves and severe storms, as well as other climate events (45).

Goals and evidence for HRSN outreach and engagement. In addition, the HRSN portion of the demonstration will include services around outreach, engagement, connection to services, and coordination of services. The waiver's outreach and engagement services will connect OHP members to the HRSN benefits described above and provide additional supports. Services will involve contacting and engaging individuals in the covered populations who may be eligible for HRSN services through a variety of strategies (i.e., mail, text, phone, email, community and street-level outreach, etc.). In addition, outreach and engagement will involve assessing members' HRSN service needs and transmitting information for eligibility determination and service authorization. The benefit will also involve connection to and coordination of related services, including helping members to enroll or maintain enrollment in Medicaid and to secure other benefits (such as Temporary Assistance for Needy Families [TANF]; Special Supplemental Nutrition Program for Women, Infants, and Children [WIC]; Supplemental Nutrition Assistance Program [SNAP]; etc.), as well as other types of navigation assistance. Social needs navigation programs have been shown to decrease health care utilization, especially in low-income populations (46) and to increase access to preventive care such as well-child visits (47). Navigation programs can also decrease family social needs and improve health outcomes (48). For example, community health workers (CHWs) provide navigation and education support that helps reduce barriers to health care coverage and improve connections to health care and social services (49,50); studies have shown that being connected with a CHW can improve patient experiences and self-reported health, as well as chronic disease outcomes (51,52).

Evaluation questions and hypotheses

The evaluation design for HRSN policies in the 2022 – 2027 1115(a) Medicaid Demonstration Waiver includes both implementation questions about how the policies were implemented and research hypotheses/evaluation questions that seek to understand the impacts of the policies. Based on the Centers for Medicare & Medicaid Services (CMS) requirements for the HRSN evaluation, Oregon proposes the following implementation questions and research hypotheses:

Implementation questions

HRSN implementation question 1. Which key entities are collaborating to implement and operationalize the demonstration, and what are their main roles? How and why have the roles or participation of those key entities changed during the demonstration?

HRSN implementation question 2. What are barriers for key entities implementing the demonstration? What strategies—including but not limited to use of infrastructure investments made possible by DSHP—have key entities used to overcome barriers? What suggestions do key entities have for improving the demonstration?

HRSN implementation question 3. What facilitators and barriers to participation do beneficiaries experience? What does this information suggest about the need for refinements to member and provider outreach as well as demonstration implementation or design more broadly?

HRSN implementation question 4. What strategies and tools do key entities use to identify OHP members with social risk factors and facilitate their participation in the demonstration? How, if at all, and why have key entities adapted these strategies? What did the state learn about promising practices for identifying and engaging potential beneficiaries?

HRSN implementation question 5. How are key entities implementing HRSN case management and providing HRSN services through the demonstration? How do activities vary by service type (housing, nutrition, climate)? What did the state learn about promising practices for delivering services to address beneficiaries' HRSNs?

- *HRSN implementation question 5a.* How, if at all, did the demonstration establish a process to share and receive screening results among key entities? How, if at all, have health care providers modified their clinical practice in response to this information?
- *HRSN implementation question 5b.* How do key entities form and maintain organizational partnerships to promote integration of health and HRSN services?
- *HRSN implementation question 5c.* To what extent is the state integrating the demonstration with its existing programs and infrastructure? What did the state learn about promising practices to support this integration?

HRSN implementation question 6. How is the DSHP program supporting key entities to develop the infrastructure needed to deliver HRSN services? What did the state learn about promising practices to build infrastructure to support HRSN screening, case management, and service delivery?

HRSN implementation question 7. How is the local availability of and investment in social services outside of the demonstration (such as housing supports) changing during the demonstration project?

- *HRSN implementation question 7a.* How is enrollment in SNAP and WIC changing during the demonstration among OHP members who are eligible for SNAP or WIC and who receive nutrition-related HRSN services through the demonstration?

Hypotheses

The following are the required research hypotheses for the HRSN policy. For each hypothesis, a specific evaluation question is included to examine impacts on inequities. This is written as a specific evaluation question to emphasize the importance of understanding any potential inequities in the included measures and the impact of the HRSN demonstration on these inequities.

HRSN research hypothesis 1. The demonstration will meet HRSN and/or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN.

- *HRSN evaluation question 1.1*. How does the HRSN demonstration impact the use of HRSN services?
- *HRSN evaluation question 1.2.* How does the HRSN demonstration impact rates of HRSN and their severities?
    - *HRSN subsidiary evaluation question 1.2a.* How does the HRSN demonstration impact beneficiaries' use of HRSN services reflecting crisis events, such as stays in emergency homeless shelters?
- *HRSN evaluation question 1.3.* How does the HRSN demonstration impact inequities in HRSN?
    - *HRSN subsidiary evaluation question 1.3a.* Does the HRSN demonstration mitigate or reduce HRSN among groups who had high rates at baseline?
    - *HRSN subsidiary evaluation question 1.3b.* Do any groups experience increasing or worsening HRSN compared to the baseline with the implementation of the HRSN demonstration?

HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.

- *HRSN evaluation question 2.1.* How does the HRSN demonstration impact the use of preventive and routine care?
    - *HRSN subsidiary evaluation question 2.1a.* How does the HRSN demonstration impact the use of behavioral health services?
- *HRSN evaluation question 2.2.* How does the HRSN demonstration impact the use of hospital and institutional care?
- *HRSN evaluation question 2.3.* How does the HRSN demonstration impact inequities in the use of preventative, hospital, and institutional care?
    - *HRSN subsidiary evaluation question 2.3a.* Does the demonstration reduce the use of hospital or institutional care among groups who had high rates at baseline?
    - *HRSN subsidiary evaluation question 2.3b.* Do any groups experience increasing use of hospital or institutional care compared to the baseline with the implementation of the HRSN demonstration?

HRSN research hypothesis 3. By meeting or reducing HRSN, the demonstration will improve physical and behavioral health outcomes among beneficiaries overall and among subpopulations who experience inequities in physical and mental health outcomes.

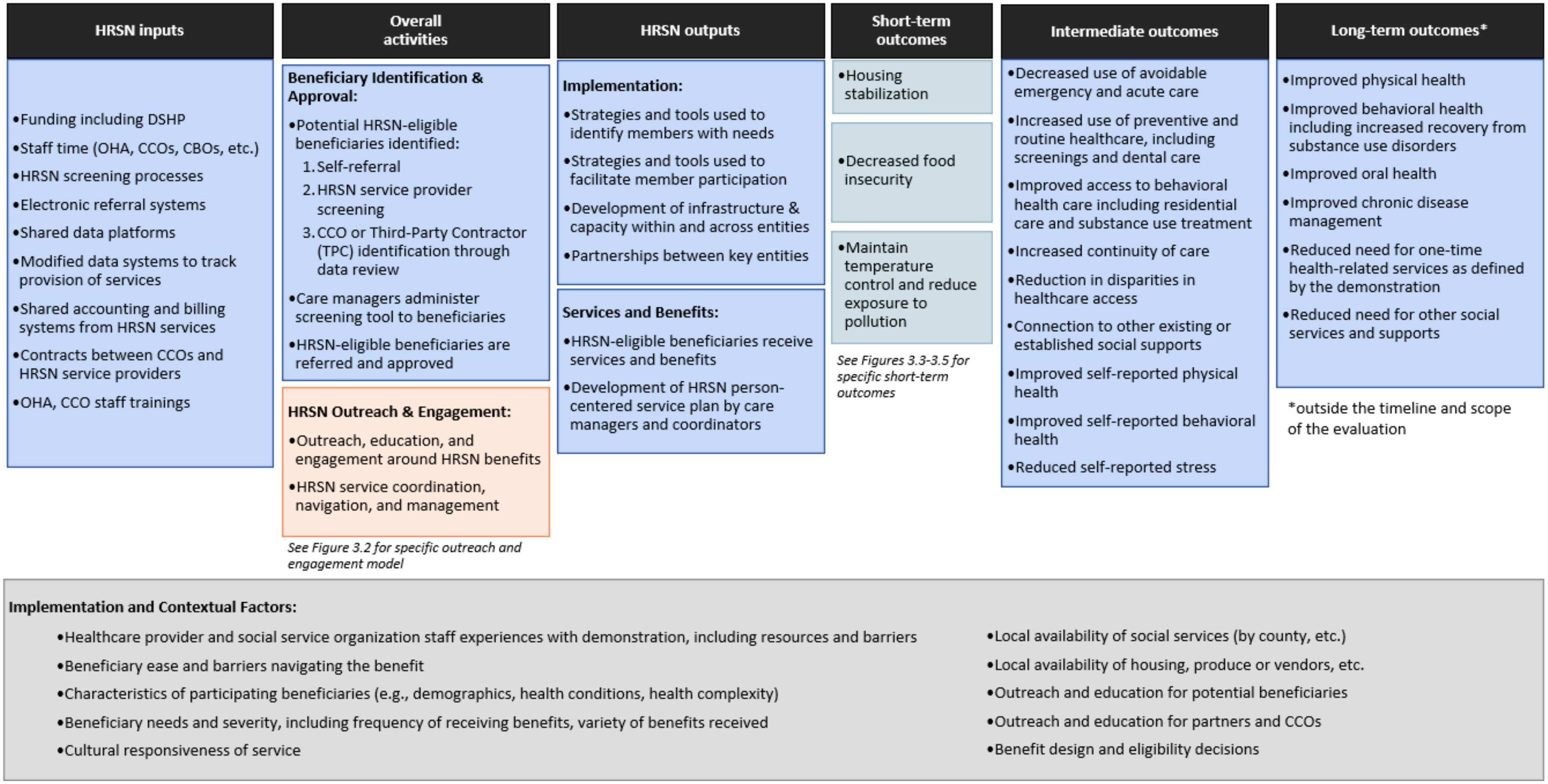
- *HRSN evaluation question 3.1.* How does the HRSN demonstration impact beneficiaries' physical and mental health outcomes?
- *HRSN evaluation question 3.2.* How does the HRSN demonstration impact inequities in health outcomes?
    - *HRSN subsidiary evaluation question 3.2a.* Does the HRSN demonstration improve the physical and behavioral health outcomes of groups who had poor health outcomes at baseline?
    - *HRSN subsidiary evaluation question 3.2b.* Do any groups experience worsening physical and behavioral health outcomes compared to the baseline with the implementation of the HRSN demonstration?

Logic model

The following logic models outline the path through which HRSN benefits are expected to provide stabilization services during transitional periods and eventually lead to improvements in health. Each of the types of HRSN benefits provide different services and lead to some variation in outcomes, with short-term outcomes the most disparate among the services and long-term outcomes eventually converging on the goal of improved health. The HRSN outreach and engagement logic model also describes the associated expected outcomes; as this benefit supports all three other HRSN services (housing, nutrition, and climate) its activities and outputs are included in each of their specific logic models as well (in orange). We have included logic models for each of the benefits (Figures 3.2-3.5), as well as an overarching logic model (Figure 3.1). Short term outcomes focus on receipt and early impacts of the HRSN benefits (0-6 months), intermediate outcomes examine impacts on health care utilization and self-reported health (6 to 24 months). The long-term outcomes section of the logic model focuses on improved clinical health and is considered outside the scope of the evaluation because these outcomes are expected to occur beyond the evaluation timeline).

- Figure 3.1. Shared inputs, activities, outputs, and outcomes across HRSN services
- Figure 3.2. Outreach and engagement-specific model
- Figure 3.3. Housing supports-specific model
- Figure 3.4. Nutrition supports-specific model
- Figure 3.5. Climate and emergency services-specific model

Figure 3.1. Shared logic model across HRSN services



HRSN inputs

- Funding including DSHP
- Staff time (OHA, CCOs, CBOs, etc.)
- HRSN screening processes
- Electronic referral systems
- Shared data platforms
- Modified data systems to track provision of services
- Shared accounting and billing systems from HRSN services
- Contracts between CCOs and HRSN service providers
- OHA, CCO staff trainings

Overall activities

Beneficiary Identification & Approval:

- Potential HRSN-eligible beneficiaries identified:
  1. Self-referral
  2. HRSN service provider screening
  3. CCO or Third-Party Contractor (TPC) identification through data review
- Care managers administer screening tool to beneficiaries
- HRSN-eligible beneficiaries are referred and approved

HRSN Outreach & Engagement:

- Outreach, education, and engagement around HRSN benefits
- HRSN service coordination, navigation, and management

See Figure 3.2 for specific outreach and engagement model

HRSN outputs

Implementation:

- Strategies and tools used to identify members with needs
- Strategies and tools used to facilitate member participation
- Development of infrastructure & capacity within and across entities
- Partnerships between key entities

Services and Benefits:

- HRSN-eligible beneficiaries receive services and benefits
- Development of HRSN person-centered service plan by care managers and coordinators

Short-term outcomes

- Housing stabilization
- Decreased food insecurity
- Maintain temperature control and reduce exposure to pollution

See Figures 3.3-3.5 for specific short-term outcomes

Intermediate outcomes

- Decreased use of avoidable emergency and acute care
- Increased use of preventive and routine healthcare, including screenings and dental care
- Improved access to behavioral health care including residential care and substance use treatment
- Increased continuity of care
- Reduction in disparities in healthcare access
- Connection to other existing or established social supports
- Improved self-reported physical health
- Improved self-reported behavioral health
- Reduced self-reported stress

Long-term outcomes*

- Improved physical health
- Improved behavioral health including increased recovery from substance use disorders
- Improved oral health
- Improved chronic disease management
- Reduced need for one-time health-related services as defined by the demonstration
- Reduced need for other social services and supports

*outside the timeline and scope of the evaluation

Implementation and Contextual Factors:

- Healthcare provider and social service organization staff experiences with demonstration, including resources and barriers
- Beneficiary ease and barriers navigating the benefit
- Characteristics of participating beneficiaries (e.g., demographics, health conditions, health complexity)
- Beneficiary needs and severity, including frequency of receiving benefits, variety of benefits received
- Cultural responsiveness of service
- Local availability of social services (by county, etc.)
- Local availability of housing, produce or vendors, etc.
- Outreach and education for potential beneficiaries
- Outreach and education for partners and CCOs
- Benefit design and eligibility decisions

Figure 3.2. Outreach and engagement logic model

Outreach & engagement activities	Outputs	Short-term outcomes	Intermediate outcomes	Long-term outcomes*
Outreach & Engagement Services •Outreach including locating and contracting members •HRSN enrollment services, including access to and support with request form •Determination of whether individuals are enrolled in a Coordinated Care Organization (CCO) or the Oregon Health Authority's Open Card. •Guidance provided in a culturally-specific and responsive manner •Connections to other social needs resources, including state and federal entitlements and benefits •Support with application assistance and coverage of state and federal benefit programs' application fees and enrollment in programs, including Medicaid enrollment •Support obtaining identification and other required documentation needed to receive benefits and other supports	•CCOs provide outreach and engagement for CCO members in HRSN Covered Populations potentially eligible for HRSN Services •Development of person-centered service plan by CCOs	•HRSN service providers bill for activities for presumed-eligible OHP members	•Member enrollment in appropriate HRSN services and supports •Connection and linkages to related social services and supports •Improved connection to health care	•Improved physical health •Improved behavioral health including increased recovery from substance use disorders •Improved oral health •Improved chronic disease management •Reduced need for social services and supports

*outside the timeline and scope of the evaluation

Figure 3.3. Housing supports logic model

Housing activities

Housing Services & Benefits

- Rent/temporary housing
- Utility costs
- Pre-tenancy and housing transition navigation services
- Tenancy-sustaining services
- One-time transition and moving costs, including housing deposits, relocation expenses, first and last month rents, etc.
- Medically necessary home accessibility modifications and remediation services

HRSN Outreach & Engagement:

- Outreach and education around services and benefit
- Connection to and coordination of services with eligible beneficiaries

Outputs

- Eligible beneficiaries receive housing-related services and benefits

- Eligible beneficiaries have an HRSN person-centered service plan
- Eligible beneficiaries receive connection to and coordination of services

Short-term outcomes

- Housing stabilization
- Decreased occurrence of eviction
- Decreased mobility
- Decreased utility shut-offs
- Decreased use of emergency shelters

Intermediate outcomes

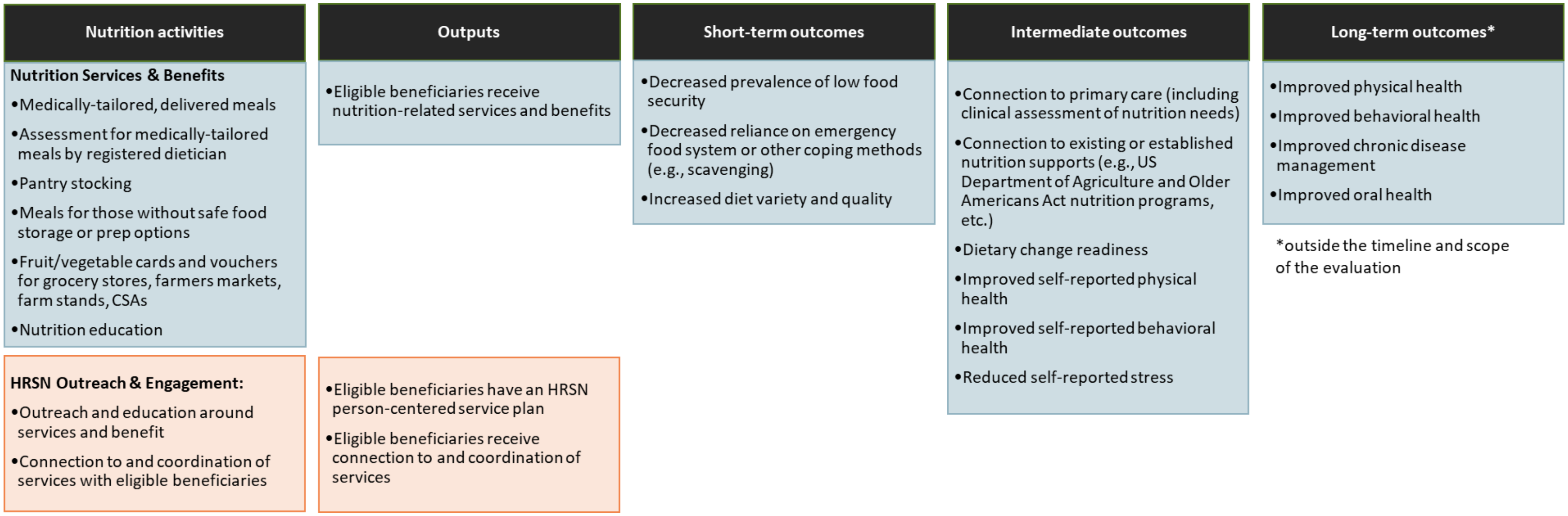
- Decreased use of avoidable emergency and acute care
- Increased use of preventive and routine healthcare, including screenings and dental care
- Improved access to behavioral health care including residential care and substance use treatment
- Increased continuity of care
- Reduction in disparities in healthcare access
- Improved self-reported physical health
- Improved self-reported behavioral health
- reduced self-reported stress

Long-term outcomes*

- Improved physical health
- Improved behavioral health including increased recovery from substance use disorders
- Improved oral health
- Improved chronic disease management

*outside the timeline and scope of the evaluation

Figure 3.4. Nutrition supports logic model



Nutrition activities	Outputs	Short-term outcomes	Intermediate outcomes	Long-term outcomes*
Nutrition Services & Benefits •Medically-tailored, delivered meals •Assessment for medically-tailored meals by registered dietician •Pantry stocking •Meals for those without safe food storage or prep options •Fruit/vegetable cards and vouchers for grocery stores, farmers markets, farm stands, CSAs •Nutrition education	•Eligible beneficiaries receive nutrition-related services and benefits	•Decreased prevalence of low food security •Decreased reliance on emergency food system or other coping methods (e.g., scavenging) •Increased diet variety and quality	•Connection to primary care (including clinical assessment of nutrition needs) •Connection to existing or established nutrition supports (e.g., US Department of Agriculture and Older Americans Act nutrition programs, etc.) •Dietary change readiness •Improved self-reported physical health •Improved self-reported behavioral health •Reduced self-reported stress	•Improved physical health •Improved behavioral health •Improved chronic disease management •Improved oral health
HRSN Outreach & Engagement: •Outreach and education around services and benefit •Connection to and coordination of services with eligible beneficiaries	•Eligible beneficiaries have an HRSN person-centered service plan •Eligible beneficiaries receive connection to and coordination of services			

*outside the timeline and scope of the evaluation

Figure 3.5. Climate devices logic model

Climate activities	Outputs	Short-term outcomes	Intermediate outcomes	Long-term outcomes*
Climate Devices •Air conditioners •Heaters •Air filtration devices •Refrigeration units •Portable power supplies	•Eligible beneficiaries receive climate-related devices	•Decreased loss of temperature-controlled medications (e.g., continuing to take medications that need refrigeration, etc.) •Less pollution exposure during climate emergencies •Decreased use of emergency heating and cooling shelters	•Decreased use of avoidable emergency care during climate emergencies •Decreased use of acute care for climate-sensitive conditions •Reduction in disparities in healthcare access •Improved self-reported physical health •Improved self-reported behavioral health •Reduced self-reported stress	•Improved physical health •Improved behavioral health •Improved chronic disease management
HRSN Outreach & Engagement: •Outreach and education around services and benefit •Connection to and coordination of services with eligible beneficiaries	•Eligible beneficiaries have an HRSN person-centered service plan •Eligible beneficiaries receive connection to and coordination of services			

*outside the timeline and scope of the evaluation

Methodology: HRSN implementation questions

This section describes the overall approach and methodology for the HRSN implementation questions, including the methodological design, evaluation period, focus and comparison populations, evaluation measures, and analysis. The evaluation design for the research hypotheses covers the same sections. Data sources and methodological limitations for the implementation and research questions are discussed in subsequent sections.

Approach overview table: HRSN implementation questions

The table below provides the question; proposed outcome measures; sample/population, comparison groups; data sources; and analytic methods for the implementation questions listed above. Further details are given in the sections following the table.

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN demonstration implementation				
Implementation question 1. Which key entities are collaborating to implement and operationalize the demonstration, and what are their main roles? How and why have the roles or participation of those key entities changed during the demonstration?	- List of key entities - Map and/or description of roles - Description of changes in roles or participation - Connections between key entities - Experience with Medicaid funding - Entities missing from engagement processes	Sample: - Key entities (OHA, Coordinated Care Organizations [CCOs], Third Party Contractors [TPCs], and HRSN Connectors and Service Providers) Comparisons by: - Type of key entity (e.g., by HRSN service, region, culturally and/or linguistically specific entities, government/ Community Based Organization [CBO]) - Sector of key entity (e.g., housing)	Monitoring reports (i.e., reports prepared for CMS) and other relevant documents (e.g., meeting notes) Claims data and CCO contract reporting (e.g. Delivery System Network Report)	Document review Qualitative analysis Visualization of network of key entities (e.g., map), basic network analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN demonstration implementation				
		- CCO region and/or geography (e.g., urban/rural/frontier)	Community capacity building funds (CCBF) grant program documentation Longitudinal interviews with key entities	
Implementation question 2. What are barriers for key entities implementing the demonstration? What strategies, including but not limited to use of DSHP funds, have key entities used to overcome barriers? What suggestions do key entities have for	- Description of barriers and facilitators for implementing the demonstration - Suggestions for improving the demonstration - Effectiveness of DSHP-financed infrastructure investments in supporting the development and implementation of the HRSN initiative	Sample: - Key entities (OHA, CCOs, TPCs, HRSN Connectors and Service Providers, entities involved in non-HRSN case management for OHP members (e.g. targeted case management, developmental disability services)) Comparisons by: - Type of key entity (e.g., by HRSN service, region, culturally and/or linguistically specific entities, government/ CBO)	CCBF grant program documentation Discussion board for key entities Longitudinal interviews with key entities	Document review Qualitative analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN demonstration implementation				
improving the demonstration?		- Sector of key entity (e.g., housing) - CCO region or geography (urban/rural/frontier)		
Implementation question 3. What facilitators and barriers to participation do HRSN beneficiaries experience? What does this information suggest about the need for refinements to member and provider outreach as well as demonstration implementation or design more broadly?	- Description of barriers and facilitators experienced by OHP members/ HRSN beneficiaries (e.g., barriers or facilitators related to benefit design, decisions about eligibility criteria, outreach and engagement, the Person Centered Service Plan, and communication channels and timing) - Grievances or appeals filed by beneficiaries - Concerns brought to the OHA Ombuds Program	Sample: - Beneficiaries receiving HRSN services Comparisons by: - CCO region or geography (urban/rural/frontier) - Method of HRSN request (e.g., self-referral, HRSN provider, or CCO/TPC review) - HRSN service provider - Fee For Service (FFS)/Open Card - Groups (disaggregated to the greatest degree possible): ○ Age ○ Sexual orientation and gender identity ○ Race/ethnicity ○ Language preference ○ Disability status ○ HRSN eligibility group	Interviews with beneficiaries and/or their representatives CCO Contract Reporting (Exhibit I) Medicaid concerns, tracked by OHA Ombuds program REALD and SOGI Data Repository	Qualitative analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN outreach and engagement, service provision, and infrastructure				
Implementation question 4: What strategies and tools do key entities use to identify OHP members with social risk factors and facilitate their participation in the demonstration? How, if at all, and why have key entities adapted these strategies? What did the state learn about promising practices for identifying and engaging potential beneficiaries?	- Strategies and tools used to identify members with needs - Strategies and tools used to facilitate member participation - Adaptations made to strategies - Lessons learned about member identification, outreach, and engagement (e.g., authorization timing, coordination of services, effective and ineffective strategies for member identification and participation)	Sample: - Key entities (OHA, CCOs, TPCs, and HRSN connectors and service providers) Comparisons by: - Type of key entity (e.g., by HRSN service, region, culturally and/or linguistically specific entities, government/ CBO) - Sector of key entity (e.g., housing), CCO region or geography (urban/rural/frontier) - Population served	Monitoring reports and other relevant documents (e.g., meeting notes) CCO Contract Reporting (Readiness Assessments) Discussion board for key entities Longitudinal interviews with key entities	Document review Qualitative analysis
Implementation Question 5: How are key entities implementing HRSN case management and	- Descriptions of HRSN outreach and engagement (overall and by service type)	Sample: - Key entities (OHA, CCOs, TPCs, HRSN connectors and service providers, entities involved in	Monitoring reports and other relevant documents	Document review Qualitative analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN outreach and engagement, service provision, and infrastructure				
providing HRSN services through the demonstration? How do activities vary by service type (housing, nutrition, climate)? What did the state learn about promising practices for delivering services to address beneficiaries' HRSNs?	- Descriptions of HRSN service provision (overall and by service type) - Lessons learned about delivering services - Extent to which HRSN services providers and CCO/OHA care coordinators are interacting to better meet health needs	non-HRSN case management for OHP members) Comparisons by: - Type of key entity (e.g., by HRSN service, region, culturally and/or linguistically specific entities, government/ CBO) - Sector of key entity (e.g., housing) CCO region or geography (urban/rural/frontier) - Population served	(e.g., meeting notes) Discussion board for key entities Longitudinal interviews with key entities CCO Contract Reporting (HRSN Report: Care Coordination and Referrals)	
Implementation question 5a. How, if at all, did the demonstration establish a process to share and receive screening results among key entities?	- Description of data sharing in the screening process - Reasons for using or not using the Community Information Exchange (CIE) - Plans to support CIE adoption - CIE challenges and lessons learned	Sample: - Key entities (OHA, CCOs, TPCs, and HRSN connectors and service providers) - Health care providers Comparisons by: - Type of key entity (e.g., by HRSN service, region,	Monitoring reports and other relevant documents (e.g., meeting notes) CCO annual Health	Document review Qualitative analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN outreach and engagement, service provision, and infrastructure				
How, if at all, have health care providers modified their clinical practice in response to this information?	- Modifications made to clinical practice - Adequacy of provider access to the closed loop system	culturally and/or linguistically specific entities, government/CBO) - Sector of key entity (e.g., housing) - Type of health care provider - CCO region or geography (urban/rural/frontier)	Information Technology (HIT) roadmaps Discussion board for key entities Longitudinal interviews with key entities Interviews with health care providers	
Implementation question 5b. How do key entities form and maintain organizational partnerships to promote integration of health and HRSN services?	- Process of forming and maintaining partnerships	Sample: - Key entities (OHA, CCOs, TPCs, and HRSN connectors and service providers) Comparisons by: - Type of key entity (e.g., by HRSN service, region, culturally and/or linguistically specific entities, government/CBO)	Monitoring reports and other relevant documents (e.g., subcontractor and delegate reports)	Document review Qualitative analysis Basic network analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN outreach and engagement, service provision, and infrastructure				
		- Sector of key entity (e.g., housing) - CCO region or geography (urban/rural/frontier)	Discussion board for key entities Longitudinal interviews with key entities	
Implementation question 5c. To what extent is the state integrating the demonstration with its existing programs and infrastructure? What did the state learn about promising practices to support this integration?	- Integration of HRSN services and financing, including DSHP, with existing Medicaid infrastructure - Lessons learned about integration	Sample: - State entities that offer and/or fund programs addressing social needs (e.g., OHA, Oregon Department of Human Services [ODHS], Oregon Housing and Community Services [OHCS], local public health entities)	Longitudinal interviews with OHA and other state agency staff	Qualitative analysis
Implementation question 6. How is the DSHP program supporting key entities to develop the infrastructure	- Specific activities and items supported by DSHP funds (CCBF grant program) - Value of DSHP in supporting HRSN infrastructure and service delivery	Sample: - Key entities (OHA, CCOs, TPCs, and HRSN connectors and service providers) Comparisons by:	CCBF grant program documentation Discussion board for key entities	Document review Qualitative analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN outreach and engagement, service provision, and infrastructure				
needed to deliver HRSN services? What did the state learn about promising practices to build infrastructure to support HRSN screening, case management, and service delivery?	- Lessons learned about building infrastructure (e.g., effectiveness and sustainability of the benefit and its delivery and management infrastructure, reimbursement methods and arrangements developed by CCOs for HRSN partnerships)	- Type of key entity (e.g., by HRSN service, region, culturally and/or linguistically specific entities, government/ CBO) - Sector of key entity (e.g., housing) - Receipt of DSHP funds (i.e., CCBF grant program - CCO region or geography (urban/rural/frontier)	Longitudinal interviews with key entities Data collected by agencies providing capacity building support for HRSN providers	
Implementation question 7. How is the local availability of and investment in social services outside of the demonstration (such as housing supports) changing during the demonstration project?	- Documented changes in local availability of and investment in social services outside of the demonstration (e.g., changes in CCO flexible services) - Processes for connection of HRSN beneficiaries to other services	Sample: - Key entities (OHA, CCOs, TPCs, and HRSN connectors and service providers) Comparisons by: - CCO region or geography (urban/rural/frontier)	Ongoing environmental scan of social services outside of the demonstration Discussion board for key entities Longitudinal interviews with key entities	Document review Qualitative analysis

Implementation questions	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN outreach and engagement, service provision, and infrastructure				
Implementation question 7a. How is enrollment in SNAP and WIC changing during the demonstration among OHP members who are eligible for SNAP or WIC and who receive nutrition-related HRSN services through the demonstration?	- Documented changes in enrollment	Sample: - Beneficiaries receiving nutrition-related HRSN services Comparisons by: - CCO region or geography (urban/rural/frontier) - HRSN service provider - FFS/Open Card - Groups (disaggregated to the greatest degree possible): ○ Age ○ Sexual orientation and gender identity ○ Race/ethnicity ○ Language preference ○ Disability status ○ HRSN eligibility group	Cross-agency data warehouses (e.g. Integrated Client Services database and Oregon Reporting, Research, Analytics, and Integration database) Oregon Medicaid claims REALD and SOGI Data Repository	Descriptive statistics

Evaluation design: HRSN implementation questions

The evaluation of the HRSN policy component will use a mixed-methods study design, relying on quantitative and qualitative data and analysis as well as primary and secondary data collection efforts to assess HRSN implementation questions.

HRSN implementation question 1 will first rely on a qualitative review of documents to identify key entities; these documents may include monitoring reports prepared for CMS, CCBF grant program documentation (such as guidelines, applications, disbursement procedures, expenditure reports, and any changes or updates made to the fund), and other documents relevant to implementation. Once key entities are identified through the document review, longitudinal interviews (i.e., multiple interviews with the same representatives from key entities) with representatives from these entities will be conducted to understand roles, potential changes in participation over the course of the demonstration, and connections between key entities. The independent evaluator will leverage its partnership with the state to identify appropriate representatives of the key entities to include in the interviews and will use research recruitment best practices (e.g., reach out via email, send reminders, offer flexibility in timing and user-friendly ways to sign up for interviews) to engage individuals and schedule interviews. Connections described by key entities and identified via document review will be used to help visualize the network of key entities and conduct a basic network analysis where possible. Interested Parties suggested that in addition to representatives from OHA, CCOs, TPCs, and HRSN Connectors and Service Providers, key entities should include those that provide HRSN supports and service connection and coordination outside of the waiver, for populations such as individuals with developmental disabilities or YSHCN. Examples of these key entities may include caseworkers at county-based developmental disabilities programs, support service brokerages, community-based case managers assisting people living with HIV, or some Maternal and Child Health case managers.

HRSN implementation question 2 will use a combination of qualitative data sources to understand barriers and facilitators for implementing the demonstration, suggestions for improving implementation, and the effectiveness of infrastructure investments, including DSHP funds, in supporting the development and implementation of the HRSN initiative. These will be explored via a review of CCBF grant program documentation as well as two primary data collection efforts: 1) longitudinal interviews with key entities, and 2) an online, asynchronous “focus group” for key entities, essentially a discussion board, using software such as QualBoards. The discussion board will feature new questions each round for key entities to respond to, and it will remain open through the month to allow for responses and discussion as implementation occurs. We suggest up to six rounds of focus groups across 2025 and 2026. Learnings from the discussion board and longitudinal interviews will inform each other over the course of the evaluation.

HRSN implementation question 3 will primarily rely on qualitative interviews with HRSN beneficiaries (and/or their caregivers or representatives in cases where beneficiaries are unable to provide consent to participate in interviews, or unable to provide assent to participate in cases where guardian consent is provided) to understand barriers and facilitators experienced and identify areas where beneficiary and/or provider outreach and benefit implementation may be refined. This question will also rely on a review of Medicaid concerns, grievances, and appeals tracked by CCOs and the OHA Ombuds program. Based on input from Interested Parties, examples of specific facilitators and barriers that may be explored are benefit design, decisions about eligibility criteria, communication channels, outreach strategies, and timing.

HRSN implementation question 4 will use a combination of qualitative data sources to explore and document lessons learned about identifying beneficiaries for participation in the demonstration, including strategies that were effective as well as those that were ineffective (e.g., resulted in missed populations). These factors will be explored via a review of documents relevant to implementation (e.g., CCO contract monitoring reports) and CCBF grant program documentation, as well as through the discussion board and longitudinal interviews with key entities described above.

HRSN implementation questions 5, 5a, 5b, and 5c will use a variety of methods to understand implementation of HRSN outreach and engagement; lessons learned related to service delivery, screening, infrastructure development, and formation of organizational partnerships; and integration with the existing state infrastructure and financing mechanisms. Most of these questions will rely on review of relevant documents (e.g., contract monitoring reports) and on the discussion board and longitudinal key entity interviews described above. Specific key entities to be interviewed differ across these questions; for example, HRSN implementation question 5a includes the perspective of health care providers and HRSN implementation question 5c focuses on entities such as state agencies and local public health entities. HRSN implementation questions 5, 5a, and 5b will also include other key entities such as CCOs and HRSN Connectors and Service Providers. Interview findings related to organizational partnerships may also be used to conduct basic network analyses for HRSN implementation question 5b.

HRSN implementation question 6 will use a combination of qualitative data sources to examine how DSHP funds support development of HRSN infrastructure and lessons learned about implementing HRSN outreach and engagement and service delivery. These will be explored via a review of documents relevant to implementation (e.g., CCBF grant program documentation) and data collected by agencies providing capacity building support to HRSN providers, as well as through the discussion board and longitudinal interviews with key entities described above. In alignment with input from Interested Parties, this question will also explore the effectiveness and sustainability of the benefit and its infrastructure, particularly with regard to delivery and management of services.

HRSN implementation questions 7 and 7a will use various data sources to understand changes in the local availability of and investment in social services outside of the demonstration, as well as changes in SNAP and WIC enrollment for beneficiaries receiving nutrition-related HRSN services. This question is understood as referring to supplantation of services and assessing the extent to which receipt of HRSN nutrition-related services supplants assistance from and enrollment in SNAP and WIC. An environmental scan will be used to understand the local availability of services; this scan will include identifying and reviewing relevant data and policies to understand social services being provided outside of the demonstration. HRSN implementation question 7 will also rely on the discussion board and longitudinal interviews with key entities described above. HRSN implementation question 7a will primarily rely on descriptive analyses of Medicaid Claims and OHA/ODHS Integrated Client Services data to understand enrollment changes across programs.

Evaluation period: HRSN implementation questions

The HRSN Services policy is separated into climate; housing; nutrition; and outreach and engagement. Each type of HRSN service has a different implementation timeline. Climate services launched in March 2024, housing services will begin in November 2024, and nutrition services will start in January 2025. OHA approved approximately $38 million in community capacity building funds in 2024, financed by the DSHP program, for CCOs to award to community-based organizations and social service agencies that plan to provide HRSN services. Outreach and engagement services began with the climate services and will continue as each additional benefit launches through the entire demonstration period. The demonstration period concludes in 2027. The evaluation period for the HRSN policy will begin in 2024, with the implementation of some components of the policy, and ends in 2027. An additional 18 months beyond the demonstration period will be used for analysis and dissemination.

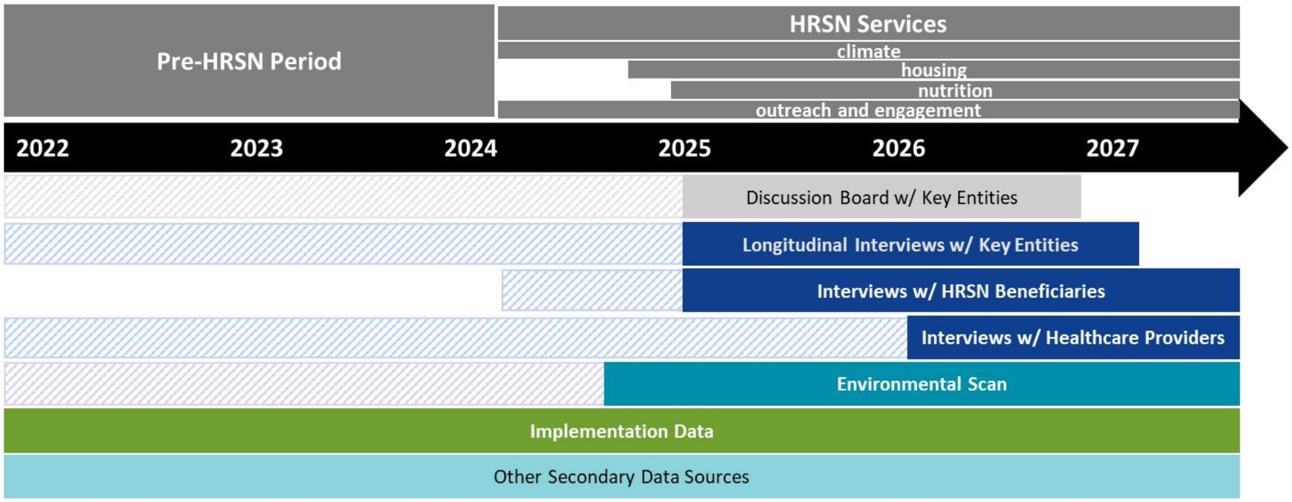
In Figure 3.6, we depict the timing of data collection for HRSN implementation questions during the evaluation period. The figure shows the timing of actual data collection in solid colors and the period which data will cover in striped colors. For example, while longitudinal interviews with key entities will take place beginning in 2025, they will ask interviewees about what was happening in the pre-HRSN period as well. Some data sources represented in the figure, such as beneficiary interviews, will also be used for the research hypotheses (see Evaluation Period: Research Hypotheses for more). More information on all data sources can be found here.

For HRSN implementation questions 1-7a, the evaluation period will include the following:

- **Discussion board with key entities.** Key entities identified in Implementation Question 1 will be invited to participate in an online, asynchronous "focus group," essentially a discussion board, using software such as QualBoards. The discussion board will feature new questions each round for key entities to respond to, and it will remain open through the month to allow for responses and discussion as implementation occurs. We anticipate up to six rounds of discussion board "focus groups" occurring from 2025 through 2026.
- **Longitudinal interviews with key entities.** Beginning in 2025, individuals representing key entities will be interviewed twice a year through the end of 2026, resulting in four time points of longitudinal qualitative interview data.

- **Interviews with HRSN beneficiaries.** Interviews with HRSN beneficiaries will be conducted throughout this three-year period of 2025-2027.
- **Interviews with health care providers.** In 2026-2027, interviews with health care providers will be conducted at two time points, once per year.
- **Environmental scan.** An environmental scan will be conducted to capture two time points (early implementation and later implementation stages). The scan will rely on some secondary data sources, such as legislatively approved budgets, regional and county-level investment data for social services, and CCO Transformation and Quality Strategy reports.
- **HRSN implementation data.** Implementation data will be collected for the time period of 2022-2027. These data may include CCO contractually-required reporting, OHA monitoring or other reports and presentations, meeting notes, and information about the disbursement and use of DSHP funds (i.e. CCBF grant program) .
- **Other secondary data sources.** Other secondary data will be collected from 2022-2027. These data may include data collected by agencies providing capacity building support, concern, grievance, and appeals data from the OHA Ombuds Program and CCOs, and data from Integrated Client Services and Medicaid Claims.

Figure 3.6. Evaluation period for HRSN implementation questions



Focus and comparison populations: HRSN implementation questions

HRSN implementation question 1. Which key entities are collaborating to implement and operationalize the demonstration, and what are their main roles? How and why have the roles or participation of those key entities changed during the demonstration? The study population for this question includes the key entities that are collaborating to implement the demonstration.

- **Key entities.** Organizations, groups, and service providers that are part of the operationalization of the demonstration; these key entities will be invited to participate in longitudinal interviews. These entities will likely include representatives from OHA, CCOs, TPCs, HRSN Connectors and HRSN Service Providers. In addition, these entities may include those that provide HRSN supports, outreach and engagement, and connection to and coordination of services outside of the waiver, for populations such as individuals with developmental disabilities or YSHCN. The evaluation will make comparisons across types of key entities, including HRSN service providers that did and did not receive DSHP funds via the CCBF grant program, and CCO region or geography. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 20-40 interviews at each time point (for a total of 80-160 interviews) to support reaching saturation.

HRSN implementation question 2. What are barriers for key entities implementing the demonstration? What strategies—including but not limited to use of infrastructure investments made possible by DSHP—**have key entities used to overcome barriers? What suggestions do key entities have for improving the demonstration?** The study population for this question will primarily be the key entities defined in HRSN implementation question 1 who are collaborating to implement the demonstration (see description above).

- **Key entities.** Representatives from OHA, CCOs, TPCs, HRSN Connectors and HRSN Service Providers, and entities involved in non-HRSN case management; these key entities will be invited to participate in the discussion boards and longitudinal interviews. See HRSN implementation question 1 for more detail on types of key entities and planned comparisons across groups. The final number of interviews and discussion board participants will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 20-40 interviews and discussion board participants at each time point (for a total of 80-160 interviews and up to 200 discussion board participants) to support reaching saturation. The independent evaluator will leverage its partnership with the state to make sure the appropriate roles of key entity staff are selected for the different types of qualitative data collection (i.e. discussion board/focus groups vs. longitudinal interviews). This will be based on the types of questions being asked in these different qualitative approaches to make sure the independent evaluator is capturing diverse perspectives for individuals with experiences of the implementation topics.

HRSN implementation question 3. What facilitators and barriers to participation do beneficiaries experience? What does this information suggest about the need for refinements to member and provider outreach as well as demonstration implementation or design more broadly? The study population for this question includes beneficiaries receiving HRSN services who were selected for interviews and those filing grievances or appeals.

- **HRSN beneficiary interviewees.** Interviews will be conducted with HRSN beneficiaries (and/or their caregivers or representatives in cases where beneficiaries are unable to provide consent to participate in interviews, or unable to provide assent to participate in cases where guardian consent is provided) 6-12 months after receiving an HRSN service. Comparisons may be made by CCO region or geography, FFS/Open Card membership,

method of HRSN request, HRSN service provider, and by beneficiary socio-demographics. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend an increased number of interviews due to the importance of capturing the HRSN beneficiary perspective and to include a mix of experiences (such as different HRSN types or CCO regions). We suggest at least 60 – 80 interviews a year over the three- year period, for a total of 180 – 240 interviews.
- **HRSN beneficiaries filing grievances or appeals.** Medicaid/OHP members who were authorized for an HRSN service and who filed a grievance or appeal. Comparisons may be made by CCO region or geography, method of HRSN request, HRSN service provider, and by beneficiary socio-demographics.

HRSN implementation question 4. What strategies and tools do key entities use to identify OHP members with social risk factors and facilitate their participation in the demonstration? How, if at all, and why have key entities adapted these strategies? What did the state learn about promising practices for identifying and engaging potential beneficiaries? The study population for this question will be the key entities defined as part of the first implementation question.

- **Key entities.** See description in HRSN implementation question 2.

HRSN implementation question 5. How are key entities implementing HRSN case management and providing HRSN services through the demonstration? How do activities vary by service type (housing, nutrition, climate)? What did the state learn about promising practices for delivering services to address beneficiaries' HRSNs? The study population for this question will be the key entities defined as part of the first implementation question.

- **Key entities.** See description in HRSN implementation question 2.

HRSN implementation question 5a. How, if at all, did the demonstration establish a process to share and receive screening results among key entities? How, if at all, have health care providers modified their clinical practice in response to this information? The study population for this question will be the key entities as well as health care providers.

- **Key entities.** See description in HRSN implementation question 2.
- **Health care providers.** In collaboration with OHA and CCOs, the independent evaluator will identify a sample of health care providers who work with HRSN beneficiaries; these individuals will be invited to participate in focused longitudinal interviews. Where possible, comparisons across types of providers will be made. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 20-40 interviews at each time point (for a total of 40-80 interviews) to support reaching saturation.

HRSN implementation question 5b. How do key entities form and maintain organizational partnerships to promote integration of health and HRSN services? The study population for this question will be the key entities as described previously.

- **Key entities.** See description in HRSN implementation question 2.

HRSN implementation question 5c. To what extent is the state integrating the demonstration with its existing programs and infrastructure? What did the state learn about promising practices to support this integration? The study population for this question will include a smaller set of state and local key entities.

- **Limited key entities.** Key entities limited to state and local entities that offer or fund programs addressing social needs; these key entities will be invited to participate in longitudinal interviews. These entities may include OHA, ODHS, and other state agency staff, as well as local public health entities. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 20-40 interviews at each time point (for a total of 80-160 interviews) to support reaching saturation.

HRSN implementation question 6. How is the DSHP program supporting key entities to develop the infrastructure needed to deliver HRSN services? What did the state learn about promising practices to build infrastructure to support HRSN screening, case management, and service delivery? The study population for this question will be the key entities as defined previously.

- **Key entities.** See description in HRSN implementation question 2.

HRSN implementation question 7. How is the local availability of and investment in social services outside of the demonstration (such as housing supports) changing during the demonstration project? The study population for this question will be the key entities as defined previously.

- **Key entities.** See description in HRSN implementation question 2.

HRSN implementation question 7a. How is enrollment in SNAP and WIC changing during the demonstration among OHP members who are eligible for SNAP or WIC and who receive nutrition-related HRSN services through the demonstration? The study population for this question will include only HRSN beneficiaries receiving nutrition-related services.

- **HRSN beneficiaries receiving nutrition-related services.** OHP members who were authorized and then received a nutrition-related HRSN service. Comparisons may be made by CCO region or geography, FFS/Open Card membership, HRSN service provider, and by beneficiary socio-demographics.

Measures: HRSN implementation questions

The tables below list the descriptions and data sources for proposed measures to be included in the evaluation. The independent evaluator will provide measure specifications in the interim and summative reports for each quantitative measure used: this will include numerator and denominator definitions.

HRSN implementation question 1. Which key entities are collaborating to implement and operationalize the demonstration, and what are their main roles? How and why have the roles or participation of those key entities changed during the demonstration? Measures for the evaluation of this question will come from data collected from key entities via longitudinal interviews and a review of implementation data.

Data source	Measure
Longitudinal interviews with key entities; Implementation data	***Interview domains*** ▶ List of key entities ▶ Map and/or description of roles of key entities ▶ Description of changes in roles or participation of key entities ▶ Connections between key entities ▶ Experience with Medicaid funding, including DSHP funding via the CCBF grant program ▶ Entities missing from engagement processes

HRSN implementation question 2. What are barriers for key entities implementing the demonstration? What strategies—including but not limited to use of infrastructure investments made possible by DSHP--have key entities used to overcome barriers? What suggestions do key entities have for improving the demonstration? Measures for the evaluation of this question will come from data collected from key entities via the discussion board and longitudinal interviews and a review of implementation data.

Data source	Measure
Discussion board and longitudinal interviews with key entities; Implementation data	***Discussion and interview domains*** ▶ Description of barriers and facilitators for implementing the demonstration ▶ Suggestions for improving the demonstration ▶ Effectiveness of DSHP infrastructure investments in supporting the development and implementation of the HRSN initiative

HRSN implementation question 3. What facilitators and barriers to participation do beneficiaries experience? What does this information suggest about the need for refinements to member and provider outreach as well as demonstration implementation or design more broadly? Measures for the evaluation of this question will come from data collected from interviews with beneficiaries and/or their representatives and a review of Medicaid concerns, grievances, and appeals tracked by CCOs and the OHA Ombuds program.

Data source	Measure
Interviews with HRSN beneficiaries	***Interview domains*** ▶ Description of barriers and facilitators experienced by OHP members/ HRSN beneficiaries (e.g., barriers and facilitators related to benefit design, decisions about eligibility criteria, the Person Centered Service Plan, and communication channels and timing)
CCO Contract Reporting (Exhibit I)	▶ Grievances or appeals filed by beneficiaries
Medicaid concerns, tracked by OHA Ombuds program	▶ Concerns brought to the OHA Ombuds Program

HRSN implementation question 4. What strategies and tools do key entities use to identify OHP members with social risk factors and facilitate their participation in the demonstration? How, if at all, and why have key entities adapted these strategies? What did the state learn about promising practices for identifying and engaging potential beneficiaries? Measures for the evaluation of this question will come from data collected from key entities via the discussion board and longitudinal interviews and a review of implementation data such as monitoring reports, CCBF grant program documentation, and other relevant documents.

Data Source	Measure
Discussion board and longitudinal interviews with key entities; Implementation data	***Discussion and interview domains*** ▶ Strategies and tools used to identify members with needs ▶ Strategies and tools used to facilitate member participation ▶ Adaptations made to strategies used to identify members with needs and facilitate participation ▶ Lessons learned about member identification and engagement (e.g., authorization timing, effective and ineffective strategies for member identification and participation)

HRSN implementation question 5. How are key entities implementing HRSN case management and providing HRSN services through the demonstration? How do activities vary by service type (housing, nutrition, climate)? What did the state learn about promising practices for delivering services to address beneficiaries' HRSNs? Measures for the evaluation of this question will come from data collected from key entities via the discussion board and longitudinal interviews and a review of implementation data.

Data source	Measure
Discussion board and longitudinal interviews with key entities; Implementation data	***Discussion and interview domains*** ▶ Description of HRSN outreach and engagement overall ▶ Description of HRSN outreach and engagement by service type ▶ Description of HRSN service provision overall ▶ Description of HRSN service provision by service type ▶ Lessons learned about delivering HRSN services ▶ Extent to which HRSN services providers and FFS/Open Card and CCO/OHA care coordinators are interacting to better meet health needs

HRSN implementation question 5a. How, if at all, did the demonstration establish a process to share and receive screening results among key entities? How, if at all, have health care providers modified their clinical practice in response to this information? Measures for the evaluation of this question will come from data collected from key entities, including health care providers, via the discussion board and longitudinal interviews and a review of implementation data.

Data source	Measure
Discussion board and longitudinal interviews with key entities; Implementation data (including CCO Annual HIT Roadmaps)	***Discussion and interview domains*** ▶ Description of data sharing in the screening process ▶ Reasons for using or not using the CIE ▶ Plans to support CIE adoption ▶ CIE challenges and lessons learned
Interviews with health care providers	***Interview domains*** ▶ Modifications made to clinical practice ▶ Adequacy of provider access to the closed loop system

HRSN implementation question 5b. How do key entities form and maintain organizational partnerships to promote integration of health and HRSN services? Measures for the evaluation of Implementation Question 5b will come from data collected from key entities via the discussion board and longitudinal interviews and a review of implementation data.

Data source	Measure
Discussion board and longitudinal	***Discussion and interview domains*** ▶ Process of forming and maintaining partnerships

interviews with key entities; Implementation data	

HRSN implementation question 5c. To what extent is the state integrating the demonstration with its existing programs and infrastructure? What did the state learn about promising practices to support this integration? Measures for the evaluation of this question will come from data collected from longitudinal interviews with a specific group of key entities – state and local entities that offer programs addressing social needs.

Data source	Measure
Longitudinal interviews with key entities (state and local entities)	***Interview domains*** ▶ Integration of HRSN services and financing, including DSHP, with existing Medicaid infrastructure ▶ Lessons learned about integration with existing Medicaid infrastructure

HRSN implementation question 6. How is the DSHP program supporting key entities to develop the infrastructure needed to deliver HRSN services? What did the state learn about promising practices to build infrastructure to support HRSN screening, case management, and service delivery? Measures for the evaluation of this question will come from data collected from key entities via the discussion board and longitudinal interviews and a review of implementation data and data collected by agencies providing capacity building support.

Data source	Measure
Discussion board and longitudinal interviews with key entities; Implementation data	***Discussion and interview domains*** ▶ Lessons learned about building infrastructure for HRSN (e.g., effectiveness and sustainability of the benefit and its delivery and management infrastructure, reimbursement methods and arrangements developed by CCOs for HRSN partnerships) ▶ Value of DSHP in supporting HRSN infrastructure and service delivery
CCO contract reporting; CCBF grant program documentation; Data collected by agencies providing capacity building support	▶ Specific activities and items supported by DSHP funds (i.e., CCBF grant program)

HRSN implementation question 7. How is the local availability of and investment in social services outside of the demonstration (such as housing supports) changing during the

demonstration project? Measures for the evaluation of this question will come from data collected from key entities via the discussion board and longitudinal interviews and an ongoing environmental scan.

Data source	Measure
Discussion board and longitudinal interviews with key entities	***Discussion and interview domains*** ▶ Processes for connection of HRSN beneficiaries to other services
Environmental scan	▶ Documented changes in local availability of and investment in social services outside of the demonstration (e.g., changes in CCO flexible services)

HRSN implementation question 7a. How is enrollment in SNAP and WIC changing during the demonstration among OHP members who are eligible for SNAP or WIC and who receive nutrition-related HRSN services through the demonstration? Measures for the evaluation of this question will come from Integrated Client Services (ICS) data and Oregon Medicaid Management Information System (MMIS).

Data source	Measure
ICS and MMIS data	▶ Documented changes in enrollment in SNAP and WIC among OHP members who receive nutrition-related HRSN services

Analytic methods: HRSN implementation questions

Qualitative analysis

The independent evaluator will be responsible for solidifying the qualitative analysis approach used in this evaluation. However, we anticipate the steps described below within each of the proposed qualitative analysis techniques.

Document review. This analytic technique will involve identifying and acquiring relevant documents (e.g., contract monitoring reports, meeting notes, CCBF grant program documentation), creating coding framework(s) for documents, coding documents, organizing codes into categories, examining patterns, and identifying themes. Almost all implementation questions will leverage document review (HRSN implementation questions 1, 2, 4, 5, 5a, 5b, 6, and 7).

Qualitative analysis (including descriptive, thematic, and comparative analysis approaches). This analytic technique will involve creating structured discussion board guides and interview guides that cover key topics of interest, translating guides into multiple languages as needed, assessing the validity of the guides through cognitive interviews with individuals selected from the study population, conducting discussion boards and interviews (with interpretation for participants as needed), transcribing and coding all interviews with double-coding for accuracy, organizing codes into categories, examining patterns, and transforming them into themes. Almost all implementation questions will leverage qualitative analysis (HRSN implementation questions 1, 2, 3, 4, 5, 5a, 5b, 5c, 6, and 7). Thematic qualitative analysis will be used for overarching analyses across data sources (multiple rounds of discussion boards and longitudinal interviews). For subgroup analyses, a descriptive qualitative analysis approach will be used that leverages the coding work described above for smaller subgroups to ensure that experiences across these groups are represented; where possible, a comparative thematic analysis approach can be applied to make comparisons across larger subgroups where thematic saturation is feasible.

Quantitative analysis

The following quantitative analysis techniques will be used to answer the listed HRSN evaluation questions.

Descriptive statistics. All HRSN implementation questions that require quantitative analysis will begin with descriptive statistics, for example: means, medians, or percentages; or measures of distribution and spread, such as the interquartile range. For some questions, descriptive statistics may be the most appropriate quantitative analytic technique, and therefore the only ones used. HRSN implementation questions that will only use descriptive statistics include:

- **HRSN implementation question 7a**. How is enrollment in SNAP and WIC changing during the demonstration among OHP members who are eligible for SNAP or WIC and who receive nutrition-related HRSN services through the demonstration?

Visualization of network of key entities and basic network analysis. This analytic technique involves visualizing the key entities identified via qualitative analyses and using basic network analysis to understand connections within and characteristics of the network. For example, social network analytic measures could be used to describe density of connections between key entities involved in HRSN outreach, engagement, and service provision, or to assess whether certain types of entities are more or less central to the network. This technique requires that qualitative discussion and interview guides include questions about network structure and functions or capacity. HRSN implementation questions that may use network visualization and analysis include:

- **HRSN implementation question 1.** Which key entities are collaborating to implement and operationalize the demonstration, and what are their main roles? How and why have the roles or participation of those key entities changed during the demonstration
- **HRSN implementation question 5b.** How do key entities form and maintain organizational partnerships to promote integration of health and HRSN services?

Data Sources for the HRSN implementation questions can be found here.

Methodology: HRSN research hypotheses

This section describes the overall approach and methodology for the HRSN research hypotheses, including the methodological design, evaluation period, focus and comparison populations, and evaluation measures. The evaluation design for the implementation questions covers the same sections above. Data sources and methodological limitations for the implementation and research questions are discussed in subsequent sections.

Approach overview table: Research hypotheses

The table below provides the evaluation questions; proposed outcomes measures; sample/population and comparison groups; data sources; and analytic methods for the research hypotheses listed above. Further details are provided in the sections following the table.

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN.				
Evaluation question 1.1. How does the HRSN demonstration impact the use of HRSN services?	Number of people receiving HRSN services Types of HRSN services received among HRSN beneficiaries (e.g. outreach and engagement, housing, nutrition, climate) Avg. number of HRSN services received per HRSN beneficiary. % who received more than 1 HRSN service	Sample: HRSN beneficiaries, including the following groups: -HRSN service type -HRSN eligibility category HRSN beneficiary survey respondents, including the following groups: -HRSN service type -HRSN eligibility category Comparison population: Health-related services recipient through CCO flexible services	Oregon Medicaid claims CCO financial reporting (Exhibit L) HRSN beneficiary survey	Descriptive analysis (e.g. means and percentages) Trend over time for use of services Cross-sectional or longitudinal survey analysis Multivariable regression

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN.				
	Per Member Per Year (PMPY) HRSN service utilization Self-reported use of HRSN services (including services not provided through the demonstration benefit)	prior to implementation of the HRSN policy Health-related services recipient through CCO flexible services post implementation of the HRSN policy		Pre/Post analysis
Evaluation question 1.2. How does the HRSN demonstration impact rates of HRSN and their severities?	Self-reported health-related social needs Self-reported severity of health-related social needs Self-reported impact of HRSN benefits on health-related social needs Self-reported impact of HRSN benefit on health-related social needs after benefit is complete *Housing specific:* Return to homelessness	Sample: HRSN beneficiary survey respondents, including the following groups: -HRSN service type -HRSN eligibility category HRSN beneficiary interviewees	HRSN beneficiary survey Interviews with people who received HRSN services Homeless Management Information System (HMIS) data, for housing only	Descriptive analysis (e.g. means and percentages) Cross-sectional or longitudinal survey analysis Qualitative analysis of interviews

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN.				
	Placement or retention in permanent housing # of people becoming homeless for the first time			
Subsidiary evaluation question 1.2a. How does the HRSN demonstration impact beneficiaries' use of HRSN services reflecting crisis events, such as stays in emergency homeless shelters?	Self-reported use of emergency services such as: -emergency food banks -emergency cooling and warming shelters -emergency shelters	Same as 1.2	HRSN beneficiary survey HRSN beneficiary interviews	Same as 1.2
Evaluation question 1.3. How does HRSN demonstration impact inequities in HRSN?	Number of people authorized for HRSN services Number & percent of people not authorized Percent authorized who received HRSN services	Sample: Medicaid members authorized for HRSN services. HRSN beneficiaries. HRSN beneficiary survey respondents.	Oregon Medicaid claims HRSN beneficiary survey	Descriptive analysis (e.g. means and percentages) by disaggregated group) Trend over time analysis by

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN.				
	All other measures listed above in 1.1, 1.2, and 1.2a	Groups (disaggregated to the greatest degree possible): - Age - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Medical complexity - FFS/Open Card	CCO financial reporting (Exhibit L) CCO Contract Reporting (Exhibit I) REALD and SOGI Data Repository	disaggregated groups Comparative statistics for group differences Cross-sectional or longitudinal survey analysis
Subsidiary evaluation question 1.3a. Does the HRSN demonstration mitigate or reduce HRSN among groups who have high rates at baseline?	Self-reported health-related social needs Self-reported health-related social need severity Self-reported impact of HRSN benefits on health-related social needs	Sample: HRSN beneficiary survey respondents with higher need of HRSN services (as determined by self-report)	HRSN beneficiary survey	Descriptive analysis (e.g. means and percentages) Cross-sectional or longitudinal survey analysis
Subsidiary evaluation question 1.3b. Do any groups experience	Same as 1.3a	Sample: HRSN beneficiary survey respondents.	Same as 1.3a	Same as 1.3a

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN.				
increasing or worsening of HRSN compared to the baseline with the implementation of the HRSN demonstration?		Groups (disaggregated to the greatest degree possible): - Age - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Medical complexity - FFS/Open Card		

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.				
Evaluation question 2.1. How does the HRSN demonstration impact the use of preventive and routine care?	Access to outpatient care Continuity of care Child and adolescent well-care visits	Sample: HRSN beneficiaries. Additional eligibility criteria could include a specific diagnosis for certain measures. Groups include: -HRSN service type	Oregon Medicaid claims All Payers All Claims (APAC) data for	Descriptive analysis (e.g. means and percentages) Paired tests

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.				
	Childhood immunization status Adult flu vaccination Age-appropriate screenings Prenatal and postpartum care Access to contraception Any dental service Preventive dental services Oral evaluation Asthma medication ratio Self-reported access to care	-HRSN eligibility category HRSN beneficiary survey respondents. Groups include: -HRSN service type -HRSN eligibility category Climate HRSN comparison group: OHP members residing in geographic areas that experience climate events prior to the implementation of the HRSN climate benefit.	Medicare claims (for dual-eligible Medicaid members) HRSN beneficiary survey HRSN beneficiary interviews	Cross-sectional or longitudinal survey analysis Qualitative analysis of interviews Pre/Post analysis
Subsidiary evaluation question 2.1a. How does the demonstration impact the use of BH services?	Access to outpatient BH care Follow-up care for children prescribed attention deficit/hyperactive disorder medication	Sample: Same as 2.1; additional eligibility criteria could include specific diagnoses for certain measures	Same as 2.1	Same as 2.1

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.				
	Antidepressant medication management Follow-up after hospitalization for mental illness Follow-up after emergency department visit for mental illness or substance use disorder Initiation and engagement of substance use disorder treatment Adherence to antipsychotic medications Use of pharmacotherapy for opioid use disorder Self-reported access to BH care			
Evaluation question 2.2. How does the demonstration impact the use of hospital and institutional care?	Emergency department visits (physical health & BH) Emergency department visits for non-emergent needs	Sample: Same as 2.1; additional eligibility criteria could include specific diagnoses for certain measures	Same as 2.1	Same as 2.1

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.				
	Emergency department visits for climate sensitive conditions Hospitalizations (physical health & BH) Hospitalizations for ambulatory care sensitive conditions Hospitalizations for heat-related illnesses Readmissions after hospitalizations (physical health & BH) Residential substance use disorder (SUD) treatment Self-reported access to care			
Evaluation question 2.3. How does the HRSN demonstration impact inequities in the use of preventive,	Same measures listed in 2.1, 2.1a, and 2.2	Sample: Same as 2.1 w/ groups (disaggregated to the greatest degree possible): - Age	Same as 2.1 REALD and SOGI Data Repository	Descriptive analysis (e.g. means and percentages)

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.				
hospital, and institutional care?		- Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Medical complexity - FFS/Open Card		Cross-sectional or longitudinal survey analysis Comparative statistics for group differences Difference-in-differences
Subsidiary evaluation question 2.3a. Does the demonstration reduce the use of hospital and institutional care among groups who had high rates at baseline?	Same measures listed in 2.2	Sample: HRSN beneficiaries with high baseline rate of hospitalization (compared to Medicaid norms and other HRSN beneficiaries)	Oregon Medicaid claims APAC data for Medicare claims (for dual-eligible Medicaid members)	Descriptive analysis (e.g. means and percentages) Paired tests
Subsidiary evaluation question 2.3b. Do any groups experience increasing use of	Same measures listed in 2.2	Sample: HRSN beneficiaries. Additional eligibility criteria could include a	Same as 2.3	same as 2.3

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care.				
hospital and institutional care compared to the baseline with the implementation of the HRSN demonstration?		specific diagnosis for certain measures Disaggregated groups as listed in 2.3		

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. By meeting or reducing HRSN, the demonstration will improve physical and mental health outcomes among beneficiaries overall and among subpopulations who experience disparities in physical and mental health outcomes.				
Evaluation question 3.1. How does the HRSN demonstration impact beneficiaries physical and BH outcomes?	Self-reported physical health Self-reported BH Self-reported stress	Sample: HRSN beneficiary survey respondents. Groups include: -HRSN service type -HRSN eligibility category HRSN beneficiary interviewees HRSN beneficiaries. Additional eligibility criteria could include a	HRSN beneficiary survey HRSN beneficiary interviews	Descriptive analysis (e.g. means and percentages) Cross-sectional or longitudinal survey analysis Qualitative analysis of interviews

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. By meeting or reducing HRSN, the demonstration will improve physical and mental health outcomes among beneficiaries overall and among subpopulations who experience disparities in physical and mental health outcomes.				
		specific diagnosis for certain measures.		Paired tests
Evaluation question 3.2. How does the HRSN demonstration impact inequities in health outcomes?	Same as in 3.1	Same as in 3.1 w/ groups (disaggregated to the greatest degree possible): - Age - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Medical complexity - FFS/Open Card	Same as 3.1 REALD and SOGI Data Repository	Same as 3.1, and: Comparative statistics for group differences DiD analysis
Subsidiary evaluation question 3.2a. Does the HRSN demonstration improve the physical and BH outcome of groups who had poor health outcomes at baseline?	Same as 3.1	Sample: HRSN beneficiary survey respondents with poor health at baseline HRSN beneficiary interviewees with poor health at baseline (as identified through surveys or claims)	Same as 3.1	Descriptive analysis (e.g. means and percentages) Cross-sectional or longitudinal survey analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. By meeting or reducing HRSN, the demonstration will improve physical and mental health outcomes among beneficiaries overall and among subpopulations who experience disparities in physical and mental health outcomes.				
				Qualitative analysis of interviews Paired tests
Subsidiary evaluation question 3.2b. Do any groups experience worsening physical and BH outcomes compared to the baseline with the implementation of the HRSN demonstration?	Same as 3.1	Sample: Same as question 3.1 with the following groups (disaggregated to the greatest degree possible): - Age - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Medical complexity - FFS/Open Card	Same as 3.1	Same as 3.2a

Evaluation design: HRSN research hypotheses

The evaluation of the HRSN policy component will use a mixed-methods study design, relying on quantitative and qualitative data and analysis as well as primary and secondary data collection efforts to assess HRSN research hypotheses.

HRSN research hypothesis 1 will use Medicaid claims data, CCO financial reporting (Exhibit L), surveys, and interviews to understand need, receipt, and impact of HRSN services including inequities across groups. For HRSN research question 1.1, Medicaid claims data will be used to understand HRSN services received among HRSN beneficiaries. Data on ‘flexible services,’ a category of health-related services that has been reported by CCOs since 2018, will be used to understand the landscape of health-related services provided before the demonstration including population served and types of services provided. This can be compared to the services provided after implementation of the demonstration through the HRSN benefit and continued flexible services to understand how the landscape of services are changing. Further, flexible services and HRSN benefits can be compared after the demonstration project to understand how HRSN and flexible services are contributing to the health-related services landscape to meet the need in the OHP population.

For HRSN research question 1.2, there is no systematic collection of health-related social needs in the OHP population so rates of these needs cannot be accurately estimated at a population level. Further, the state is not requiring a standardized tool to assess and collect HRSN screening information among HRSN beneficiaries, so the independent evaluator will not have access to screening tool data. Thus, this question will focus on HRSN beneficiaries and use a newly designed HRSN beneficiary survey to capture more information on health-related social needs such as types of HRSN, number, and frequency, as well as to understand self-reported use of emergency services related to HRSN (HRSN research question 1.2a). HMIS data may be used to explore impacts on housing-related measures. Interviews with HRSN beneficiaries will also be used to capture impacts of HRSN services. For HRSN research question 1.3, all the above data will be explored by a variety of groups to identify inequities and examine impacts of HRSN services. This question will also explore potential inequities in authorization for receipt of HRSN services (using CCO contracts reporting data, Exhibit I) and, once authorized, inequities in whether someone authorized ends up receiving HRSN services.

Interested Parties emphasized a focus on understanding impacts on populations with physical or mental disabilities. This has been added as a group in Hypothesis 1 as well as in Hypotheses 2 and 3. Also noting that the HRSN beneficiary survey offers a way to potentially identify another population group of interest – people who live and work in multiple regions (such as migrant farmworkers) – through appropriate survey questions. This would allow survey results to be stratified by this population as well. The survey will also be used in Hypotheses 2 and 3. Surveys and interviews will be conducted with HRSN beneficiaries and/or their caregivers or representatives in cases where beneficiaries are unable to provide consent to participate, or unable to provide assent to participate in cases where guardian consent is provided.

For HRSN research hypothesis 2, health care claims will be used to understand impacts of HRSN services on use of health care, including impacts on inequities in care. Analyses will examine changes in patterns and use of care before and after receipt of services for each HRSN beneficiary including preventative care (HRSN research questions 2.1 and 2.1a) and hospital and institutional care (HRSN research question 2.2). For climate services, comparison populations impacted by climate events prior to the HRSN policy will be constructed and compared to populations experiencing climate events after the HRSN policy, specifically among those who receive HRSN climate services. HRSN beneficiary surveys and interviews will be used to understand self-reported impacts on access to health care. Inequities in all health care use outcomes will be explored in HRSN research question 2.3, and changes in hospital care for those with high use or increasing use will also be explored in HRSN research questions 2.3a and 2.3b. Feedback from Interested Parties focused strongly on the importance of understanding inequities and impacts on health equity. Based on this feedback, research question 2.3 has been expanded to explore inequities in preventive, hospital, and institutional care (instead of focused solely on hospital and institutional care).

For HRSN research hypothesis 3, we will use HRSN beneficiary surveys to capture self-reported impacts on physical health, behavioral health, and stress (HRSN research question 3.1). Interviews with HRSN beneficiaries will also be used to understand how HRSN services have impacted their health. Potential inequities in these self-reported health outcomes will be explored in HRSN research question 3.2, including a focus on understanding changes for those with poor health at baseline or potential worsening of health outcomes over time (HRSN research questions 3.2a and 3.2b).

Evaluation period: Research hypotheses

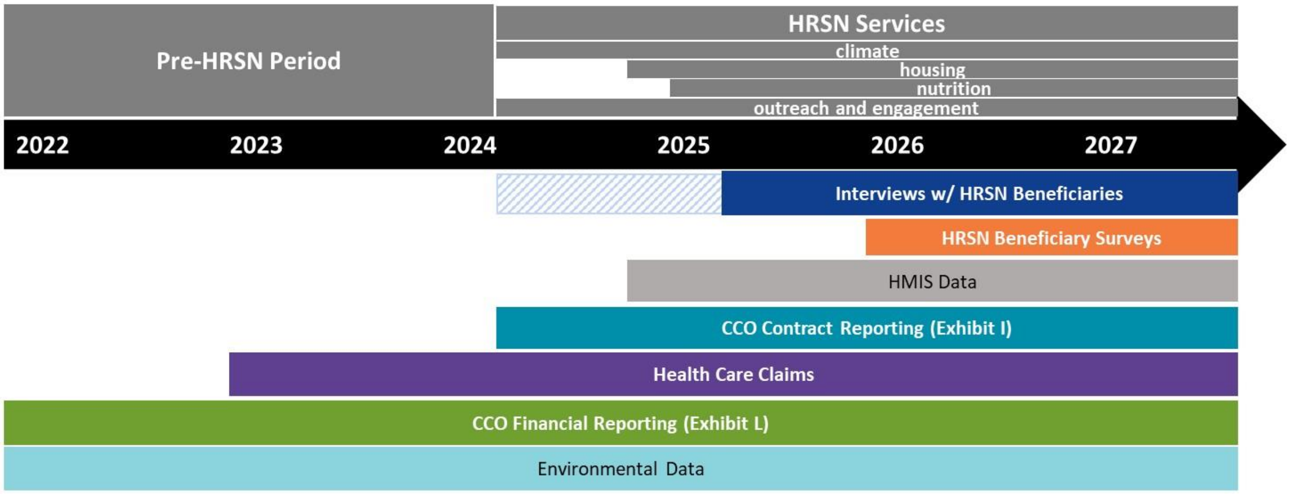
As described in the evaluation period section for the implementation questions, the HRSN climate services launched in March 2024, housing services will begin in November 2024, and nutrition services will start in January 2025. Outreach and engagement services began with the climate services and will continue as each additional benefit launches through the entire demonstration period. The 1115 waiver period concludes in 2027. The evaluation period for the HRSN policy will begin in 2024 with the implementation of some components of the policy, and end in 2027. An additional 18 months beyond the waiver period will be used for analysis and dissemination.

In Figure 3.7, we depict the timing of data collection for the HRSN research questions during the evaluation period; some data sources, such as beneficiary interviews, will also be used for the HRSN implementation questions (see Evaluation period: implementation questions for more). The evaluation period for HRSN research questions 1-3 will include the following:

- **Interviews with HRSN beneficiaries** will begin in 2025 and will occur through 2027. Interviewees in early 2025 will be reflecting back on services provided in 2024 and their resulting impacts (as indicated in the figure with the striped portion of the bar). A selection of interviews may be longitudinal.

- **The HRSN beneficiary survey** will launch by 2026, which will allow time for development and testing of the survey in 2025. Depending on logistical feasibility, the survey will either be longitudinal or a single timepoint. If a longitudinal approach is used, surveys will be fielded after Medicaid members are authorized for services (to capture baseline) and then again 6 months later to capture change over time. If the single timepoint is used, HRSN beneficiaries will be surveyed ~6 months after receipt of HRSN services.
- **Homeless Management Information System (HMIS data).** If possible, HMIS data will be used to descriptively explore a selection of housing measures. This data would be collected during the housing benefit period (November 2024 through to the end of the demonstration in 2027).
- **Health care claims** will be collected from 2023 to 2027 (of note, there is typically a claims lag ranging from three to 12 months, which means that to capture 2027, claims data will actually be acquired in 2028). For analyses that leverage a paired test design, baseline data will be captured one year prior to the receipt of services and up to one year after receipt of services. For example, individuals who receive climate services in March 2024 will have a baseline from March 2023-March 2024 and a post period from April 2024-April 2025; while individuals who receive housing services in January 2025 would have a baseline from January 2024-January 2025 and post period from February 2025-February 2026. Additionally, health care claims will be collected in the pre-HRSN period for populations experiencing climate events for pre/post comparisons.
- **CCO financial reporting (Exhibit L)** will be collected before and after the implementation of HRSN services. Data on flexible services (including health-related services) provided by CCOs has been collected since 2018. We recommended including at least two years (2022-2024) of data prior to the implementation of HRSN, but more can be included. Of note, HRSN services will also be included as part of the CCO financial reporting after implementation.
- **CCO Contract Reporting (Exhibit I)** will be collected while HRSN services are being provided (March 2024 until the end of the demonstration in 2027) to capture individuals who were denied HRSN services.
- **Environmental data** will be collected in the pre-HRSN period and post to capture climate events used for the climate services analyses.

Figure 3.7. Evaluation period for HRSN research hypotheses



Focus and comparison populations: HRSN research hypotheses

Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN. The study population for this hypothesis includes the Medicaid members who have received HRSN services, respondents to the HRSN beneficiary survey, HRSN beneficiaries who participate in interviews, and potential comparison groups.

- **HRSN beneficiaries.** All Medicaid members who received an HRSN service. Beneficiaries will be separated into groups such as HRSN service type, HRSN eligibility category, age, sexual orientation and gender identity, race/ethnicity, language preference, CCO region or geography (e.g. urban, rural, frontier), disability status, and medical complexity.
- **HRSN beneficiary survey respondents.** Respondents to the newly developed HRSN beneficiary survey will be included in this analysis. Surveys will be conducted with HRSN beneficiaries and/or their caregivers or representatives in cases where beneficiaries are unable to provide consent to participate, or unable to provide assent to participate in cases where guardian consent is provided. HRSN beneficiaries for the survey will be identified via HRSN claims data, stored in the Oregon Medicaid Management Information System, and/or CCO financial reporting (Exhibit L). The HRSN beneficiary survey sampling frame is anticipated to include almost the entire population of OHP members receiving HRSN services. For the housing benefit, OHA projects that 48,000 members per year will be eligible to receive services; 20% of eligible members will have a need (9,600 members); and 40% of eligible members with a need will actually receive the HRSN services (3,840 members). It is our understanding that the housing benefit is expected to be the most utilized benefit under the HRSN policy. Thus, the projected evaluation budget allows for up to 10,000 surveys over two years (5,000 per year in 2026 and 2027), which should be sufficient to survey most members receiving services during that period. The survey respondents will also be separated into the groups described in the 'HRSN beneficiaries' section above. If it is not possible to survey all HRSN beneficiaries, then survey fielding will rely on a stratified sampling strategy to ensure representation from different CCO regions, as well as oversampling of traditionally underrepresented groups such as people of color,

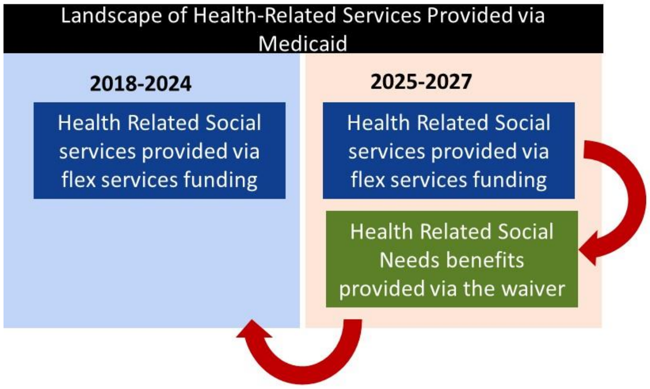
individuals who speak languages other than English, and individuals with a disability. The specific sampling strategy will be finalized by the independent evaluator in collaboration with OHA. See details on this survey in the data sources section below.

- **HRSN beneficiary interviewees.** Approximately 6-12 months after receipt of HRSN services, a selection of beneficiaries will be identified for interviews. Interviews will be conducted with HRSN beneficiaries and/or their caregivers or representatives in cases where beneficiaries are unable to provide consent to participate, or unable to provide assent to participate in cases where guardian consent is provided. It is anticipated that these interviews would be conducted starting in 2025 and continue through 2027. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend an increased number of interviews due to the importance of capturing the HRSN beneficiary perspective and to include a mix of experiences (such as different HRSN types, CCO regions, and FFS/Open Card). We suggest at least 60 - 80 interviews a year over the three- year period, for a total of 180 - 240 interviews. The final criteria for selection will also be determined by the independent evaluator but should ensure that diverse demographics are represented among the interviewees. Note that some interviews may be longitudinal.
- **OHP members denied HRSN services.** Individuals who were reviewed for the HRSN benefit but were not authorized (i.e. denied) will be included in certain analyses especially those focused on exploring potential inequities in HRSN.
- **Comparison group.** A comparison group to understand the need and use of HRSN services is not easily identifiable as data on HRSN and services is not readily collected or available in other states. However, in Oregon, OHP members also have access to support for social needs in the form of flexible services that may be provided by CCOs. These CCO flexible services provide non-covered services, including health-related services, that are not otherwise covered as a supplement to the covered benefits. Eligibility for CCO flexible services is not limited to specific OHP populations. CCOs must approve the flexible service, but clinical approval is not required. Tracking of flexible services began in 2018 and flexible services will continue to be available throughout the waiver. Thus, two potential non-equivalent comparison groups could be created to support answering specific questions on how the demonstration impacts the landscape of HRSN services (related to HRSN research question 1.1):
    - **Flexible service recipients prior to implementation of the HRSN waiver policy.** The CCO financial reporting (Exhibit L) will provide an understanding of the health-related social need services and population served prior to the HRSN waiver policy. This can be used to compare the landscape of services provided after the demonstration through the HRSN benefit and the continued flexible services. Of note, some OHP members who receive flexible services prior to the demonstration may overlap with OHP members who receive the HRSN benefit, but their benefits will have been received during two different time periods.
    - **Flexible service recipients post implementation of the HRSN waiver policy.** The population of individuals on Medicaid receiving services for their health-related

social needs through CCO flexible services post implementation of the waiver will provide a contemporaneous group of individuals receiving HRSN supports outside of the HRSN benefit. The individuals who receive services under the HRSN benefit can be compared to individuals receiving services under the CCO flexible services to understand similarities and differences in the populations and services provided. For example, we may learn that fewer people need flexible services once the HRSN policy is in place, but that certain populations who do not meet the HRSN eligibility criteria are getting their needs met through flexible services instead, or that flexible services fills specific gaps in health-related services not covered by the HRSN benefit. Of note, there are two potential types of overlap between OHP members receiving flexible services or HRSN benefits after the demonstration: first, OHP members may receive flexible services and HRSN benefits, as long as the services received are not the same (since CCO flexible services include services not covered by the HRSN demonstration), second, there may be overlap in the types of services received, as long as the population receiving the services does not meet the HRSN benefit eligibility criteria (because flexible services does not have the same population eligibility requirements). There will not, however, be a case where a member who belongs to an eligible HRSN population receives CCO flexible services that are also covered by the HRSN demonstration; in those situations, the member would receive services through the HRSN demonstration.

Please see the figure below that further depicts how the CCO flexible services population will be used to understand the impact of the demonstration on the landscape of health-related services. Of note, no outcomes will be compared across these groups, the independent evaluator will only examine the population receiving services and the types of services received.

Figure 3.8. Landscape of health-related services: CCO flexible services and the HRSN benefit



Goal: Comparing the population and types of services provided will allow us to better understand how the HRSN policy is meeting the needs of OHP beneficiaries; such as the proportion of OHP beneficiaries with health-related social needs who receive flexible services instead of HRSN services, and which populations and what types of services.
Key considerations: Differences in the eligibility criteria, however these differences will allow us to explore how the eligibility criteria for HRSN benefits may be impacting benefit delivery (e.g., are people who are determined ineligible for HRSN benefits receiving health-related services through flexible funding, and if so, are there certain ineligibility markers that are overrepresented).

Goal: Comparing the landscape of health-related services provided by Medicaid before and after the waiver. This will tell us how the overall landscape of health-related services and the population have changed since the policy was implemented, hypothesizing that the landscape has changed and the population has expanded.
Key considerations: Differences in the eligibility criteria and data quality changes over time.

Hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital and institutional care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital and institutional care use. The study population for this hypothesis includes individuals who received HRSN services, respondents to the HRSN beneficiary survey, HRSN interviewees, and potential comparison groups for specific types of HRSN services.

- **HRSN beneficiaries.** For utilization outcomes derived from health care claims, all individuals who have received an HRSN service will be included in the analysis. Specific utilization outcomes may apply additional inclusion criteria such as having specific clinical conditions or age requirements (for example, an analysis of adherence to mammography screening guidelines would be limited to women ages 50 to 74 enrolled or avoidable visits to the emergency department related to diabetes management would be limited to individuals with a diabetes diagnosis). Further, some utilization outcomes will be limited to individuals receiving a specific category of HRSN service to ensure adherence to the logic model for the types of outcomes expected from the HRSN service (see logic models for each HRSN). For example, hospitalization for climate sensitive conditions would be considered associated with HRSN beneficiaries receiving climate services. HRSN beneficiaries will also be separated into groups such as HRSN service type, eligibility category, age, gender identity, race/ethnicity, language preference, urban/rural, disability status, and medical complexity.
- **HRSN beneficiary survey respondents.** The newly developed HRSN beneficiary survey will ask questions about self-reported access to care. See HRSN research hypothesis 1 above for description of this population.
- **HRSN beneficiary interviewees.** The HRSN beneficiary interviewees will be asked about access to care. See HRSN research hypothesis 1 above for a description of this population.
- **Comparison groups.** In general, comparison groups will be limited for the HRSN population because there will not be readily available data on individuals who need HRSN services but are not receiving them. Comparison to other states is also limited because of a lack of systematic data collection on health-related social needs of Medicaid members in general. We do expect individuals to be screened, authorized, and determined to be eligible for services but then not receive them. This also is not an ideal comparison group because it will be unclear why someone did not receive the HRSN service, and those reasons may impact their outcomes in a way that cannot be accounted for in the evaluation. If people did not receive services because of capacity challenges on the service delivery end, then this group could be considered as a comparison by the independent evaluator. However, the there is a potential comparison group for individuals receiving climate HRSN services.
    - **Climate HRSN comparison group.** OHP members residing in geographic areas that experience climate events prior to the implementation of the HRSN climate benefit can be used as a comparison group. To select a comparison group prior to the demonstration, we will first need to understand the climate events occurring post demonstration. Based on that information, we will use the available environment

data sources to select geographies experiencing similar events or conditions, and then form a comparison group of OHP members matched to the intervention group on demographics and climate-sensitive health conditions.

Hypothesis 3. By meeting or reducing HRSN, the demonstration will improve physical and behavioral health outcomes among beneficiaries overall and among subpopulations who experience inequities in physical and behavioral health outcomes. The study population for this hypothesis includes individuals who received HRSN services and responded to the HRSN beneficiary survey or were selected for interviews.

- **HRSN beneficiary survey respondents.** The newly developed HRSN beneficiary survey will ask questions about self-reported physical health, behavioral health, and stress. See HRSN research hypothesis 1 above for description of this population.
- **HRSN beneficiary interviewees.** Interviewees will be asked questions about impacts of HRSN on their health. See HRSN research hypothesis 1 above for a description of this population.

Measures: HRSN research hypotheses

The tables below list the descriptions and data sources for proposed measures to be included in the evaluation. The independent evaluator will provide measure specifications in the interim and summative reports for each quantitative measure used: this will include numerator and denominator definitions.

Hypothesis 1. The demonstration will meet or reduce the severity of HRSN for beneficiaries overall and among subpopulations who experience inequities in HRSN. Measures for the evaluation of this hypothesis will come from Medicaid claims, a newly designed HRSN beneficiary survey, HRSN beneficiary interviews, and HMIS data. Additional information on the health-related services before and after the demonstration is implemented will come from the CCO financial reporting (Exhibits I & L).

Data source	Measure
Medicaid claims (and REALD SOGI data repository)	***Information on HRSN services*** ▶ Number receiving HRSN services ▶ Avg. number of HRSN services ▶ % with >1 HRSN service ▶ PMPY HRSN service utilization ▶ HRSN service type ▶ HRSN service receipt date ***Information on population demographics & diagnoses*** ▶ Demographic information for individuals who received HRSN services

	▶ Demographic information for individuals who receive health related services through the CCO flexible services ▶ Diagnoses (for HRSN beneficiary population and the population receiving health related services through the CCO flexible services)
HRSN beneficiary survey	***Survey domains*** ▶ Types of health-related service needs, such as: ○ Food insecurity ▪ Example survey questions from US Household Food Security Survey: • *I worried whether our food would run out before I got money to buy more.* • *The food that I bought just didn't last, and I didn't have money to get more.* ○ Housing stability ▪ Example survey questions from Accountable Health Communities (AHC)-HRSN Screening Tool: • *What is your living situation today? 1, I have a steady place to live. 2, I have a place to live today, but I am worried about losing it in the future. 3, I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)* • *In the last 12 months, has the electric, gas, oil, or water company threatened to shut off services in your home?* ○ Climate needs ○ Other health-related service needs ▶ Frequency of health-related service needs ▶ Types of HRSN services received ▶ Change in health-related service needs ▶ Use of emergency/crisis centers for HRSN ▶ Other impacts of HRSN benefits such as financial strain or housing readiness
HRSN beneficiary interviews	***Interview domains*** ▶ Impact of HRSN services on HRSN need ▶ Need after HRSN service period is complete ▶ Impact of HRSN services on need/use of emergency HRSN services

CCO financial reporting (Exhibit L)	▶ Population receiving health-related services ▶ Health-related service type ▶ Health-related service receipt date
CCO contract reporting (Exhibit I)	▶ Number of people not authorized for HRSN services ▶ % not authorized for HRSN services ▶ Number authorized for HRSN services ▶ % authorized who received HRSN services
HMIS data	▶ The Extent to which Persons who Exit Homelessness to Permanent Housing Destinations Return to Homelessness within 6 to 12 Months: CoC System Performance Measure 2a. Measure Steward: US Department of Housing and Urban Development ▶ Number of Persons who Become Homeless for the First Time: CoC System Performance Measure 5. Measure Steward: US Department of Housing and Urban Development ▶ Successful Placement in or Retention of Permanent Housing: CoC System Performance Measure 7b. Measure Steward: US Department of Housing and Urban Development

HRSN research hypothesis 2. By meeting or reducing the severity of HRSN, the demonstration will increase beneficiaries' use of preventive and routine care and reduce their use of potentially avoidable hospital care, leading to reduced health care spending over time. Impacts will be realized overall and among subpopulations who experience inequities in hospital care. Measures for the evaluation of this hypothesis will come from Medicaid claims, Medicare claims (for HRSN population transitioning to dual status), a newly designed HRSN beneficiary survey, and HRSN beneficiary interviews. Environmental data will also be used to construct potential comparison groups for climate services; this data is described in the data sources section.

Data source	**Measure**
Medicaid & Medicare claims (and REALD SOGI data repository)	***Information on population demographics*** ▶ Demographic information for individuals who received HRSN services ▶ Diagnoses (as needed to construct the metrics) ***Measures of preventive and primary care*** ▶ *Adults' Access to Preventive/Ambulatory Health Services.* Measure Steward: National Committee for Quality Assurance ▶ Continuity of care ○ *Continuity of Primary Care for Children with Medical Complexity.* Measure steward: Seattle Children's Research Institute.

  - *Provider Level Continuity of Care Measure*. Measure steward: American Board of Family Medicine
  - *Bice-Boxerman Continuity of Care Index.* Bice TW, Boxerman SB. A quantitative measure of continuity of care. Med Care. 1977 Apr;15(4):347-9

- *Child and Adolescent Well-Care Visits.* Primary Access and Preventive Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and Children's Health Insurance Program (CHIP). Measure steward: National Committee for Quality Assurance.
- *Childhood Immunization Status.* Primary Access and Preventive Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: National Committee for Quality Assurance.
- *Flu Vaccinations for Adults Age 18 to 64.* Measure steward: National Committee for Quality Assurance.
- *Developmental Screening in the First Three Years of Life.* Primary Access and Preventive Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: Oregon Health and Science University.
- *Breast Cancer Screening.* Primary Access and Preventive Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Cervical Cancer Screening.* Primary Access and Preventive Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Colorectal Cancer Screening.* Primary Access and Preventive Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Prenatal and Postpartum Care – Age 21 and Older.* Maternal and Perinatal Health measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Contraceptive Care – All Women Ages 21 to 44.* Maternal and Perinatal Health measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: Office of

Population Affairs.

- *Asthma Medication Ratio: Age 19-64.* Included in the 2024 Care of Acute and Chronic Conditions Adult Core Set. Measure Steward: National Committee for Quality Assurance.

Measures of preventive dental health care

- *Any Dental Service*. Measure steward: Dental Quality Alliance (DQA).
- *Preventive Dental Services*. Measure steward: DQA.
- *Oral Evaluation, Dental Services*: Dental and Oral Health Services measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: DQA.

Measures of behavioral health care (preventive and acute)

- *Mental Health Utilization – Outpatient Setting.* Measure steward: National Committee for Quality Assurance
- *Mental Health Utilization – Inpatient Setting.* Measure steward: National Committee for Quality Assurance
- *Mental Health Utilization – Emergency Department Setting.* Measure steward: National Committee for Quality Assurance
- *Mental Health Utilization – Intensive Outpatient or Partial Hospitalization.* Measure steward: National Committee for Quality Assurance
- *Utilization of SUD Residential Treatment Programs.* Value set steward: National Committee for Quality Assurance
- *Follow-up Care for Children Prescribed Attention Deficit/Hyperactivity Disorder Medication.* BH Care measure from the 2024 Core Set of Children's Health Care Quality Measures for Medicaid and CHIP. Measure steward: National Committee for Quality Assurance.
- *Antidepressant Medication Management.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Follow-Up after Hospitalization for Mental Illness – Age 18 and Older.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Follow-Up After Emergency Department Visit for Mental Illness – Age 18 and Older.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward:

National Committee for Quality Assurance.

- *Continuity of Care after Inpatient or Residential Treatment for Substance Use Disorder (SUD).* Measure Steward: CMS
- *30-Day All-Cause Unplanned Readmission Following Psychiatric Hospitalization in an Inpatient Psychiatric Facility.* Measure steward: CMS
- *Initiation and Engagement of Substance Use Disorder Treatment.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Adherence to Antipsychotic Medications for Individuals with Schizophrenia.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance.
- *Use of Pharmacotherapy for Opioid Use Disorder.* BH Care measure from the 2024 Core Set of Adult Health Care Quality Measures for Medicaid. Measure steward: Center for Medicaid Services.

Measures of acute care for physical health

- *Emergency Department Visits.* Measure Steward: National Committee for Quality Assurance
- *Non-Emergent Emergency Department Visits.* Measure Steward: California Department of Health Care Services Medi-Cal Managed Care Division.
- *Emergency Department Visits for Climate Sensitive Conditions: Syndromic Surveillance Project.* Oregon: Oregon Health Authority, Oregon ESSENCE. Available from: http://www.healthoregon.org/essence.
- *Emergency Department Visits for Ambulatory Sensitive Conditions.* Parkinson B, Meacock R, Checkland K, Sutton M. Unseen patterns of preventable emergency care: Emergency department visits for ambulatory care sensitive conditions. J Health Serv Res Policy. 2022 Jul;27(3):232-241.
- *Acute Hospitalization.* Measure Steward: National Committee for Quality Assurance
- Hospitalizations for ambulatory care sensitive conditions
    - *Prevention Quality Indicators (Adults).* Measure Steward: Agency for Health Care Research and Quality
    - *Pediatric Quality Indicators (Children).* Measure Steward: Agency for Health Care Research and Quality

	▶ *Hospitalizations for Heat-Related Illnesses: Environmental Protection Agency (EPA) Climate Change Indicator.* Measure Steward: The Centers for Disease Control (CDC) Environmental Public Health Tracking Program ▶ *Hospital All-Cause Readmissions.* Care of Acute and Chronic Conditions measure from the 2024 Core set of Adult Health Care Quality Measures for Medicaid. Measure steward: National Committee for Quality Assurance. ▶ *Prevention Quality Chronic Composite.* Measure Steward: Agency for Health Care Research and Quality
HRSN beneficiary survey	***Survey domains*** ▶ Types of health care used ▶ Access to needed health care ○ Example survey questions from Behavioral Risk Factor Surveillance System (BRFSS): ▪ *Was there a time in the past 12 months when you needed to see a doctor but could not because you could not afford it?* ▪ *About how long has it been since you last visited a doctor for a routine checkup?*
HRSN beneficiary interviews	***Interview domains*** ▶ Impact of HRSN services on access to health care

Hypothesis 3. By meeting or reducing HRSN, the demonstration will improve physical and mental health outcomes among beneficiaries overall and among subpopulations who experience inequities in physical and mental health outcomes. Measures for the evaluation of this hypothesis will come from the newly designed HRSN beneficiary survey and HRSN beneficiary interviews.

Data source	Measure
HRSN beneficiary survey	***Survey domains*** ▶ Self- reported physical health ○ Example survey questions from BRFSS: ▪ *Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?* ○ Example survey question from Patient-Reported Outcomes Measurement Information System-10 (PROMIS-10): ▪ *In general, how would you rate your physical health?* ▶ Self-reported behavioral health ○ Example survey questions from BRFSS:

	▪ *Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?* ▪ *Have you injected any drug other than those prescribed for you in the past year?* ▪ *During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor?* ○ Example survey question from PROMIS-10: ▪ *In general, how would you rate your mental health, including your mood and your ability to think?* ○ Example from Patient Health Questionnaire-2 (PHQ-2): ▪ *Over the last 2 weeks, how often have you been bothered by "feeling down, depressed, or hopeless"?* ▶ Self-reported stress ○ Example from Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) Screening Tool: ▪ *Stress is when someone feels tense, nervous, anxious, or can't sleep at night because their mind is troubled. How stressed are you?*
HRSN beneficiary interviews	***Interview domains*** ▶ Impact of HRSN on health and well-being ▶ Impact of receiving HRSN services on their health and well-being

Analytic methods: HRSN research hypotheses

Qualitative analysis

Qualitative analysis of interviews (including thematic and comparative analysis approaches). The independent evaluator will be responsible for solidifying the qualitative analysis approach used in this evaluation. However, we anticipate the following steps for interview analysis: creating structured interview guides that cover key topics of interest; translating guides into multiple languages as needed (and providing interpretation for the interviews); assessing the validity of the guides through cognitive interviews with individuals selected from the study population; transcribing and coding all interviews, with double-coding for accuracy; and using thematic analysis to organize codes into categories, examine patterns, and transform them into themes. If longitudinal interviews are included, methods of qualitative analysis of longitudinal data can also be applied. For subgroup analyses, a comparative thematic analysis approach can be used, leveraging the coding work described above and making comparisons across subgroups of interest where thematic saturation is feasible. These qualitative analysis approaches will be used for all research questions involving interviews, including the following:

- **HRSN evaluation question 1.2.** How does HRSN demonstration impact rates of HRSN and their severities?
- **HRSN subsidiary evaluation question 1.2a.** How does the HRSN demonstration impact beneficiaries' use of HRSN services reflecting crisis events, such as stays in emergency homeless shelters?
- **HRSN evaluation question 2.1.** How does the HRSN demonstration impact the use of preventive and routine care?
- **HRSN subsidiary evaluation question 2.1a.** How does the HRSN demonstration impact the use of behavioral health services?
- **HRSN evaluation question 2.2.** How does the HRSN demonstration impact the use of hospital and institutional care?
- **HRSN evaluation question 3.1.** How does the HRSN demonstration impact beneficiaries' physical and behavioral health outcomes?

Quantitative analysis

The following quantitative analysis techniques will be used to answer the various evaluation questions above.

Descriptive statistics. All evaluation questions that require quantitative analysis will begin with descriptive statistics, for example: means, medians, or percentages; or measures of distribution and spread, such as the interquartile range. For some questions, descriptive statistics may be the most appropriate quantitative analytic technique, and therefore the only ones used. If the cross-sectional survey uses a single timepoint approach, then descriptive statistics will be a major part of the analysis.

Trends over time. The evaluation questions that look at trends over time focus only on the period after the implementation of HRSN; that is, they do not include pre-period data in the analysis. The two possible analyses are a pooled cross-section analysis, which compares cross-sections of the study population at different points in time; and a time series analysis of panel data, which follows the same individuals over time. Given that we expect individuals in the study population to change over time, the pooled cross-section analysis is likely most appropriate. Implementation and evaluation questions that use trends over time include:

- **HRSN evaluation question 1.1.** How does the HRSN demonstration impact the use of HRSN services?
- **HRSN evaluation question 1.3.** How does the HRSN demonstration impact inequities in HRSN?

Within group statistical comparisons. Quantitative analytic techniques can leverage methods to understand changes within the HRSN population without requiring a separate comparison population comprised of individuals who needed but did not receive HRSN services (see focus and comparison population for the HRSN research hypothesis above for an explanation of why creating this type of comparison group is not possible). The following are within-group statistical analysis approaches that can be leveraged in this plan:

- *Longitudinal survey analysis.* If the HRSN beneficiary survey leverages a longitudinal approach, changes within an individual's responses can be statistically compared using general estimating equations or multilevel models with standard errors adjusted for the correlation of measures within individuals.
- *Paired tests.* For changes in utilization, measures of individual-level use of care will be compared before and after receipt of HRSN services using paired t-tests, paired analyses of proportions, or analysis of covariance with repeated measures. The pre and post period will range from 6-12 months before and after their index date. The index date will be defined as the date each OHP member first accessed an HRSN service.

Evaluation questions that may use these analytic techniques:

- All evaluation questions leveraging the HRSN beneficiary survey
- **HRSN evaluation question 2.1.** How does the HRSN demonstration impact the use of preventive and routine care?
- **HRSN subsidiary evaluation question 2.1a.** How does the HRSN demonstration impact the use of behavioral health services?
- **HRSN evaluation question 2.2.** How does the HRSN demonstration impact the use of hospital and institutional care?
- **HRSN subsidiary evaluation question 2.3a.** Does the demonstration reduce the use of hospital and institutional care among groups who had high rates at baseline?
- **HRSN subsidiary evaluation question 2.3b.** Do any groups experience increasing use of hospital and institutional care compared to the baseline with the implementation of the HRSN demonstration?
- **HRSN evaluation question 3.1.** How does the HRSN demonstration impact beneficiaries' physical and behavioral health outcomes?
- **HRSN subsidiary evaluation question 3.2a.** Does the HRSN demonstration improve the physical and behavioral health outcomes of groups who had poor health outcomes at baseline?
- **HRSN subsidiary evaluation question 3.2b.** Do any groups experience worsening physical and behavioral health outcomes compared to the baseline with the implementation of the HRSN demonstration?

Analysis using comparison groups. Quantitative analytic techniques that use comparison groups provide stronger evidence for determining the impacts of the HRSN policies by helping to control for secular trends that would otherwise obscure results. Two approaches, including the types of comparison, are described below:

- *Pre-post comparisons.* Although not comparing outcomes, the CCO financial reporting (Exhibit L) provides pre-period data to understand how the landscape of health-related services changes before and after the HRSN policy implementation (HRSN evaluation question 1.1). HRSN and health-related services provided through CCO flexible services will both be tracked in the CCO financial reporting during the demonstration, providing a complete picture of health-related services provided through Medicaid and will be examined at different timeframes prior to implementation of the HRSN benefit. Additionally, populations experiencing climate events prior to the climate HRSN present a comparison group for populations experiencing climate events after the climate HRSN implementation (HRSN evaluation questions 2.1, 2.1a, 2.2 For the climate benefit analysis, we anticipate the pre-demonstration period to be the two years prior to the benefit (2022 and 2023). This avoids the peak COVID-19 pandemic years that may have impacted health care utilization patterns. These pre/post comparisons can be performed through tests of means or proportions comparing summary statistics from the pre-period to summary statistics from the period post-implementation. It can also be done using the pooled cross-section analysis approach, with each year of the post-implementation period being compared to the pre-period.

- *Multivariable regression.* The CCO financial reporting (Exhibit L) also offers a way to compare health-related services provided under the HRSN policy with those provided via CCO flexible services to understand how health-related services are being distributed to OHP beneficiaries (HRSN evaluation question 1.1). Regression models will provide estimates of the differences in population and services provided between the HRSN benefit and health related services provided through CCO flexible services. This analysis can be adjusted for key covariates that may differ between the systems such as eligibility criterion for services.

Evaluation questions that may use analytic techniques involving comparison groups include:

- **HRSN evaluation question 1.1.** How does the HRSN demonstration impact the use of HRSN services?
- **HRSN evaluation question 2.1.** How does the HRSN demonstration impact the use of preventive and routine care?
- **HRSN subsidiary evaluation question 2.1a**. How does the HRSN demonstration impact the use of behavioral health services?
- **HRSN evaluation question 2.2**. How does the HRSN demonstration impact the use of hospital and institutional care?

Comparative statistics and analysis for disaggregated groups. Two techniques to statistically compare results across different groups are provided below. These types of analysis allow for a variety of different types of comparisons of interest including examining inequities.

- *Comparative statistics.* For evaluation questions assessing differences in outcomes across groups, differences can be assessed by tests of means or proportions or the inclusion of interaction terms in regression models. This approach can be leveraged for the cross-sectional survey and a variety of measures derived from the administrative data sources.
    - *Power analysis for cross-sectional survey analysis – comparing across different populations*. The evaluation budget includes funds for up to 10,000 HRSN

beneficiary surveys. We anticipate a response rate between 30-40%, resulting in approximately 3,000-4,000 total surveys. Without knowing the make-up of the population, it is difficult to estimate the sample size of our subpopulation analyses, and with so many varied outcomes we would have to conduct hundreds of power analyses. However, with a sample size of 4,000 and a subpopulation sample size of 500 we would be able to detect a 2% difference in outcome with a power of 0.86 and 0.58 respectively, and a 5% difference with a power of 0.99 and 0.81 respectively.

- *DiD analysis.* One specific use of an interaction term is when examining changes over time across groups; this can be done through a DiD design. This analysis design provides three estimates: the difference in baseline outcomes across groups, the difference in outcomes at the final endpoint across groups, and the change over time for the outcomes between the two groups. This last estimate allows for assessing the impact of receipt of HRSN on outcomes across populations and determining whether any inequities are being reduced or created. The pre and post period for the DiD will be ~6-12 months from when an OHP member first receives HRSN services.

  The main assumption unique to the DiD model is that of parallel trends in the outcome at baseline. Because there is no statistical test for this assumption, it is often assessed by plotting the outcome (such as health care utilization patterns) for the groups during the pre-period and visually comparing the trends between the two groups. Likely covariates for the HRSN DiD analyses include demographic variables available in administrative claims data (age, gender, language, race/ethnicity, rurality, and enrollment category), but as DiD analysis creates a scenario where each person acts as their own control the need for covariates is lessened. However, using flexible index dates would require a time-related covariate to be added to each analysis.

Evaluation questions that may use these analytic techniques include:

- All questions leveraging the survey as the primary data source
- **HRSN evaluation question 2.3.** How does the HRSN demonstration impact inequities in the use of preventive, hospital, and institutional care?
- **HRSN evaluation question 3.2.** How does the HRSN demonstration impact inequities in health outcomes?

Data sources: HRSN implementation questions and research hypotheses

This section describes the primary and secondary data sources needed for the HRSN evaluation.

Primary data collection

To supplement existing data collection efforts and administrative data sources, the independent evaluator will work with the state to collect information directly from staff, health care workers, and OHP beneficiaries. In addition to interviews, discussion/focus groups, and surveys, data may also be abstracted from documents, reports, and contracts relevant to waiver implementation.

Interviews and discussion/focus groups. Interviews or discussion/focus groups will be conducted with three distinct groups throughout the evaluation period: key entities implementing or funding HRSN services; the health care workforce impacted by the new benefits; and HRSN beneficiaries (and/or their caregivers or representatives in cases where beneficiaries are unable to provide consent or assent to participate). Interviews with key entities are intended to be longitudinal, interviewing the same individual or organization multiple times. The discussion/focus group with key entities is suggested to take place as an online, asynchronous discussion board using software such as Qualboards. The independent evaluator will determine the additional key elements of each of these qualitative data collections efforts, including selecting the number of and sampling frame for interviewees or discussion/focus group members, designing the interview or discussion/focus group guide to reflect the evaluation and implementation questions of interest, and setting the details of location and timing of each interview or focus group. We suggest at least 20 focus group participants each round and 20 longitudinal interviews (i.e., 80 interviews overall) to support reaching saturation.

HRSN beneficiary survey. The independent evaluator will field a well-designed beneficiary survey twice during the evaluation period. The survey will be offered in multiple languages. Either all HRSN beneficiaries will be included in the sample or a stratified sampling strategy can be used to ensure representation from different CCO regions, as well as oversampling of traditionally underrepresented groups such as people of color, individuals who speak a language other than English, and individuals with a disability. Because there is no standardized HRSN screening tool, the HRSN beneficiary survey will be critical to understanding the HRSN need among HRSN beneficiaries. The survey will therefore include questions on their health-related service needs and frequency; types of health-related services received; use of emergency/crisis services for their health-related needs; changes in health-related needs; access to health care; self-reported physical health, behavioral health, and stress; and other relevant self-report items as well as demographics including household income.

Questions will be obtained from validated sources and existing surveys where possible (such as PRAPARE, Short Form-8, PROMIS-10, PHQ-2, US Household Food Security Survey, etc.); newly designed questions will be tested with OHP members before inclusion in the survey. The proposed survey will be submitted to CMS for approval before it is fielded. HRSN beneficiaries will be identified via HRSN service claims, stored in the Oregon Medicaid Management Information System and/or CCO financial reporting (Exhibit L), described below. The fielding approach will use multi-modal outreach to offer multiple ways for individuals to respond (such as mail, email, and phone/text message – as available). Survey respondents will receive monetary compensation (e.g. $10) for their time.

Secondary data

Several existing data sources will be leveraged in the evaluation of the provision of HRSN services. The following section provides details on each data source, categorized by the type of information the data source provides.

Implementation data for document review. The independent evaluator will carefully examine and assess a range of documents pertaining to the implementation of the waiver. This includes, but is not limited to, the following:

- *OHA Ombuds report*. Reports on Medicaid concerns and compliments reported to the state Ombuds program will be reviewed for barriers and facilitators to beneficiary and provider participation.
- *Data collected by agencies providing HRSN capacity building*. Where available, data collected by non-state agencies and resulting reports on community capacity building will be reviewed to provide information on barriers and facilitators to capacity building.
- *Waiver implementation reports*. Reports from the state, CCOs, subcontractors and delegates on implementation, administration, and outcomes of the waiver demonstration. The evaluator will analyze the following:
    - *Monitoring reports*. Reports documenting the ongoing monitoring activities related to the waiver, including any findings, observations, or recommendations (e.g., the HRSN Service Provider Network Monitoring Report, among others).
    - *Meeting notes*. Records of meetings held among stakeholders, which may contain important discussions, decisions, and action items related to the waiver's implementation.
    - *CCBF documentation*. Documentation related to the DSHP-financed community capacity building fund (CCBF) grant program, including guidelines, applications, disbursement procedures, and any changes or updates made to the fund as well as reports detailing how CCOs have awarded CCBF grant program funds to local partners. The evaluator will review these reports to assess the progress and effectiveness of the DSHP program in developing and enhancing community infrastructure to provide HRSN services.
    - *CCO Annual HIT Roadmaps*. CCO Documentation of plans to support CIE adoption as well as challenges and lessons learned.
    - *Subcontractor and delegate reports*. Reports submitted by subcontractors and delegates involved in the implementation process, providing information on their activities, achievements, and challenges.
    -

Implementation/contextual data for environmental scan. The independent evaluator will conduct an environmental scan and carefully examine and assess a range of documents pertaining to relevant policies, regional strategies, and funding sources that can provide additional context. This includes, but is not limited to, the following:

- *CCO transformation and quality strategy reports*. The evaluator will review CCO reporting and OHA assessments on transformation activities as part of the environmental scan for relevant activities throughout the state.
- *Legislatively approved budgets.* State budgets will be reviewed to provide context for social services and policies outside the demonstration that may impact OHP members.
- *Regional and County-level investment data for Social Services.* Where available, the evaluator will review annual budgets, reports, policy changes, and meeting notes from county and regional governments as well as the Oregon Association of Counties Health and Human Services Steering Committee to provide context on local efforts that may vary across the state.

Health care service utilization and plan enrollment data. Information on health plan enrollment and health care utilization can come from a variety of data sources. Enrollment information can be found in the Oregon Medicaid Management Information System (MMIS). Health care utilization and outcomes can be found in APAC and MMIS. Importantly, receipt of HRSN services will also be recorded in APAC and MMIS data.

- *Oregon All Payers All Claims Database.* The APAC database is a comprehensive database that collects and stores administrative health care data from various sources, including commercial health plans, licensed third-party administrators, pharmacy benefit managers, Medicaid, and Medicare. The database contains information on insurance coverage, health service cost, and utilization for Oregon's insured populations. Medicare Fee-for-Service claims are in APAC but are not available for independent, external data requestors, so APAC data will reflect Medicare Advantage enrollees only.
- *Oregon Medicaid Management Information System (MMIS).* MMIS is a comprehensive database that contains detailed, timely, year-over-year data about Medicaid enrollees and the health care services paid by Medicaid. Claims for HRSN services will be included; thus, this data will serve as a critical source of information on receipt of HRSN services.

Enrollment in other public benefit programs. We propose using cross agency data warehouses to obtain information in other public benefit programs such as SNAP, WIC, and TANF such as the Oregon Integrated Client Services Database and Oregon. Feasibility of obtaining and using these data sources will be determined by the independent evaluator.

- *Integrated Client Services Database (ICS).* ICS maintains a Master Client Index spanning individuals served by ODHS and the Oregon Health Authority. Using the Master Client Index, the ICS facilitates the linking of individual level cross-agency datasets through creation of an individual level study identifier that is applied to all requested data sources.

- Oregon Reporting, Research, Analytics, and Integration (ORRAI) Database. Collection of data sourced from ODHS's multiple operational information systems. The data is setup as a single source of cross-program and cross-system data that can by quickly accesses and analyzed.

Housing needs and housing program data. If feasible, information on housing services, needs, and shelter availability throughout the state will be obtained from the Homeless Management Information System. Feasibility of obtaining and using this data source will be determined by the independent evaluator.

- *Homeless Management Information System (HMIS).* HMIS collects information about homeless people and the services they receive. It tracks data on housing, shelters, and services provided to those who are homeless or at risk of homelessness.

Health-related social needs services Information on screenings, authorization of HRSN services, and the provision of health-related services can be found in the HRSN eligibility screening data, the CCO financial reporting (Exhibit L), and CCO contract reporting (Exhibit I) submitted by CCOs.

- *CCO financial reporting (Exhibit L).* OHA requires CCOs to report annual spending related to health-related services provided through flexible services and HRSN services. Reporting focuses on gathering data and information related to the provision of health-related services by CCOs. Expenditures are reported at both the individual member level for direct member level services and at the organization level for community benefit initiatives.
- *CCO contract reporting (Exhibit I).* OHA requires CCOs to keep detailed records of all grievances and appeals, including information about the member, date, review, resolution, and reason. CCOs also provide quarterly reports summarizing grievances and adverse benefit determinations, which are publicly accessible and submitted to CMS. Appeal logs and information on adverse benefit determinations can be used to assess the number of denials for HRSN services and will also be reviewed for barriers and facilitators to member and provider participation.

Climate and Environment data. To accurately assess the impact of climate changes and provision of climate-related devices for OHP members, it is essential to gather additional data from various sources that can help identify the populations and regions that are most affected. This data includes information on extreme temperatures, air quality, wildfires, and other environmental factors that are specific to the location where a particular beneficiary resides. Data related to climate and air quality can be acquired from multiple state and national sources including EPA AirNow, Oregon Department of Environmental Quality air quality data and the Oregon GEOHub. Information necessary to understand the impact of climate on a particular region can be obtained from Executive Orders and the CDC's Social Vulnerability Index. These data sources would provide station names, their latitude and longitude, the daily high and low temperature, the precipitation or snowfall for the day, and a measure of air quality. Thresholds for climate events will be set using this data based on climate events that happen after the climate benefit is implemented. For example, a climate event may be defined as a daily high exceeding a certain threshold (e.g. >95F) or a daily low dropping below a certain threshold and accompanied by precipitation or snowfall (e.g. <24F or <32F with 1+ inch of precipitation). Air quality already has standard categories for indicating poor air quality with AQI (air quality index) such as between 201-300 being considered 'Very Unhealthy' and over 300 considered 'Hazardous'.

Methodological limitations

Methodological limitations inherent in this evaluation design include concerns about the validity of the statistical comparisons, particularly given the confounding impact of other policies that affect access to and utilization of care, and known equity concerns in design, available data, and analytic techniques.

Analytic concerns

There are several analytic limitations that need to be acknowledged for evaluation of the HRSN policy. Foremost among these is the absence of a robust comparison group, primarily due to the lack of systematic data collection on individuals' health-related social needs and the accessibility of HRSN services in Oregon and other states. To address this limitation, our analysis predominantly relies on within-group comparisons, utilizing paired tests of proportions to discern changes in an individual's health care utilization or health status before and after receiving HRSN services. Nonetheless, this approach may overlook broader secular trends or localized shifts that could influence outcomes. In instances where comparison groups are available, such as among populations affected by climate events prior to the implementation of HRSN waiver policies, it is imperative to meticulously account for potential differences across groups to mitigate the influence of these inherent differences that might affect outcomes. In this case, while the impact of potential secular trends is a limitation in all pre/post analyses, we will aim to limit this by adjusting for utilization patterns prior to the climate event. Finally, several data sources being used, such as CCO financial reporting (Exhibit L) have limitations due to the quality of that data changing over time, which will need to be considered in the analyses and interpretation.

With regard to the implementation questions, an additional limitation is the heavy reliance on qualitative review of implementation and contextual data, and interviews and discussion groups with key entities and HRSN beneficiaries. While robust plans should be put in place to ensure that all relevant implementation and contextual data sources are identified and reviewed, as well as to minimize desirability and recall bias during primary data collection, it is still possible that certain context will be left out of the evaluation. Results from the interviews may not be representative of the full population, but the interviewee sampling approach will aim to reflect diverse demographics and characteristics to capture varying experiences and perspectives.

Another limitation is the timing of when HRSN services are introduced. Some of the outcomes of interest, particularly impacts on health outcomes (HRSN research hypothesis 3), are considered longer-term impacts of HRSN services. The timeline between receipt of services to the end of the evaluation period may not be long enough to observe these impacts; this is why we have included self-reported health as an intermediate outcome and changes in clinical health as long-term outcomes beyond the timeline of the evaluation.

Additionally, several outcomes that will be examined will rely on self-reported data gathered through surveys and interviews. Survey analysis is limited to those who respond to surveys, which can lead to bias if the respondents are not representative of the HRSN beneficiary population; however, the survey fielding will aim to capture diverse demographics and experiences. Demographics of the survey respondents will be compared to the full universe of individuals sent a survey to understand any potential differences in the population. There are also logistical and cost challenges associated with fielding a survey. As the HRSN benefit focuses on transitioning populations, this could pose challenges for the independent evaluator to track and reach individuals for survey completion. Multiple methods of outreach will be deployed to support engagement and survey completion. Additionally, survey responses can suffer from desirability and recall bias. This is also true for the interviews.

Finally, we are limited to examining the population receiving HRSN services when attempting to understand HRSN need. We will not have systematically collected information on HRSN screening and need beyond what is billed in Medicaid claims data for HRSN services, nor information on any services that are received outside of the benefit or via CCO flexible services. However, HRSN need will be assessed in the HRSN beneficiary survey and explored at a higher level via implementation questions focusing on the demonstration's integration with existing programs and the changing availability of and investment in social services outside of the demonstration.

HRSN equity considerations

There are several equity considerations related to the HRSN benefit that could have implications for the evaluation. An initial list is provided below; this list should be periodically reviewed as the HRSN benefit is further defined and implemented to ensure that equity considerations are updated and documented to inform evaluation efforts. These and other equity considerations can be incorporated into evaluation plans in a variety of ways, such as guiding the selection of key informants for interviews or the sample design for surveys, prompting the inclusion of specific interview questions or analytic steps, being recognized as a limitation, and being integrated into the interpretation of results.

- **Potential variability in the approach to screening for HRSN by providers.** It is not known whether HRSN providers will screen everyone they serve or a selection of individuals. If only a selection of individuals are screened, there is potential for bias that could create inequities in who has the opportunity to receive the HRSN benefits. This is difficult to account for in the evaluation, but interviews and discussion groups with key entities involved in implementation will explore screening practices as part of implementation, including lessons learned about member identification and engagement.

- **Lack of standardization in HRSN screening processes and tools.** OHA is not requiring the use of a single, lack of standardized screening tool in order to reduce barriers to access to HRSN benefits. However, this decision may lead to variability in how screening measurement is applied and therefore could create inequities in screening methods and eligibility determination across the HRSN providers. The approach to screening can be explored in interviews, but it will be difficult to know if potential differences in approach lead to inequities in determining who is eligible for HRSN Benefits.
- **Eligibility criteria for HRSN benefits.** There are several criteria for eligibility for HRSN services, from transitioning populations to the presence of specific chronic conditions. While the assessment of eligibility relies on self-report to remove barriers to access, the eligibility criteria may limit access in ways that could create inequities. The evaluation is designed to explore this through the comparison between the health-related services provided through CCO flexible services versus the HRSN benefit.
- **Receipt of benefit requires connection to Medicaid or HRSN provider systems.** Often the most marginalized populations with the greatest HRSN are not connected to the systems that provide these services. And even those connected to these systems often lack trust in these systems, which limits engagement. HRSN implementation plans include several different avenues for connection to the HRSN benefit including self-report, systematic screening of health care data, and a pathway to Medicaid?? enrollment to support eligibility. Further, outreach for HRSN services will leverage a variety of approaches including community-level and street-level outreach. While these approaches help to create low-barrier access to HRSN benefits for those in need, it still is important to acknowledge that some populations that could be eligible under this demonstration may be left out. If data are available on the different screening and outreach approaches, the evaluation could seek to understand how different approaches are potentially reaching these populations as well as diverse populations in general. Interviews and discussion boards with key entities currently included in the evaluation design will also allow for some exploration of this topic, including capturing promising practices for identifying and engaging populations with HRSN.

Chapter 4. Young adults with special health care needs

Young adults with special health care needs background

The demonstration's eligibility and benefit policies design for young adults with special health care needs (YSHCN) support two of Oregon's health equity goals: 1) maximizing continuous and equitable access to coverage; and 2) improving health outcomes by streamlining life and coverage transitions.

Qualifying special health care needs. The YSHCN policy applies to individuals ages 19 through 25 (up to their 26th birthday) and up to 205% of the Federal Poverty Level (FPL) (300% FPL with 5% income disregard, mirroring the Children's Health Insurance Program [CHIP] income standards) who have one of the following qualifying health care needs established before age 19:

- One or more complex chronic conditions as identified in the Pediatric Medical Complexity Algorithm (PMCA)
- Serious emotional disturbance or serious mental health issue indicated by qualifying behavioral health (BH) diagnosis
- Diagnosed intellectual or developmental disability (IDD)
- "Elevated service need" or functional limitations as determined by two or more affirmative responses to a screener (screener still in development)

These health care needs can be identified in three ways. The Oregon Health Authority's (OHA) Health Analytics team will review medical diagnostic and claims data of youth enrolled in Medicaid who are nearing age 19; all youth with diagnoses or health care utilization histories matching the PMCA or BH codes list will become automatically eligible for YSHCN services. Likewise, individuals with a diagnosed IDD identified through Oregon's Office of Developmental Disabilities Services (ODDS) will be automatically eligible to receive YSHCN benefits. Lastly, all individuals ages 18 through 25 will be automatically prompted to complete a YSHCN screener when applying for Medicaid benefits; self-reporting individuals with two or more affirmative responses on the screener will be considered to have an "Elevated Service Need" and will be eligible for YSHCN benefits.

YSHCN benefits. YSHCN benefits under the demonstration include expanded eligibility for Medicaid (including Early and Periodic Screening, Diagnostic, and Treatment [EPSDT] benefits), expanded vision and dental benefits, two-year continuous eligibility, and inclusion as an eligible population to receive health-related social needs (HRSN) supports. Currently Medicaid eligibility cuts off at 138% FPL for adults (with some exceptions, such as or pregnant individuals who may be eligible up to 185% FPL and some blind or disabled individuals who may be eligible for programs that aren't evaluated based on income) and EPSDT benefits end at age 21. YSHCN benefits will provide Oregon Health Plan (OHP) coverage for young adults who fall above the traditional income ceiling for Medicaid (ages 19 through 25 years) and expand EPSDT benefits to individuals ages 21 through 25 years.

Eligibility for YSHCN benefits will be rolled out by age group. The current schedule (subject to change) is as follows:

- Jan 2025: YSHCN ages 19 and 20 are eligible
- Jan 2026: YSHCN ages 19 through 21 are eligible
- Jan 2027: YSHCN ages 19 through 22 are eligible

All other YSHCN age groups (23 through 25 years) will become eligible after the end of the demonstration period.

Goals and evidence for continuous eligibility (CE) benefits. CE allows all Medicaid-eligible youth and adults ages 6 and older to be continuously enrolled in Medicaid for 24 months; this includes YSHCN. One of the main health equity goals of CE is to maximize continuous and equitable access to coverage by stabilizing individuals' health coverage, increasing continuity in coverage, and reducing frequency of disenrollment and re-enrollment, otherwise known as churn, which will allow for more predictable access to, and continuity of, care (2,12). The positive impact that CE can have is particularly important for the YSHCN population because life transitions, such as transitioning from pediatric to adult care, remain a challenge for YSHCN (53,54) and can greatly impact their usual source of care (55).

Goals and evidence for expanded income eligibility for Medicaid. One of the main goals of providing YSHCN with extended and expanded benefits is to improve health outcomes for this population by streamlining life and coverage transitions. OHA is hoping to accomplish this through the demonstration by allowing YSHCN to retain child eligibility levels and benefits through age 25 to help smooth the transition from pediatric to adult health care. Retaining a child benefit package means that YSHCN individuals will receive full pediatric-level OHP benefits through age 25 and extended access to pediatric providers as the young adult slowly transitions to adult providers. Providing this support during this life transition will improve continuity of care and reduce disruptions in care (56,57). A body of literature suggests that effective transition to adult care for the YSHCN population results in increased adherence to care, adult clinic attendance, patient satisfaction, quality of life, and self-care skills (53,57) while also reducing lapses or delays in care, perceived barriers to care, morbidity and mortality, hospital admission rates, and lengths of stay (53).

Goals and evidence for transitional HRSN services. Another strategy that OHA will utilize to support this population is to include YSHCN among the groups eligible for transitional HRSN services. Elements of HRSN services will vary by population and nature of the transition they are experiencing. Examples of supports that YSHCN may receive include housing transition navigation services, nutrition counseling and education, and medically tailored meals. Offering a defined set of HRSN services can provide increased stabilization for populations during major life transitions, which may support improved and consistent access to care. Research, although limited on this topic for this population, does indicate that social services that address HRSN can support improvements in health outcomes for YSHCN by increasing connections to services, improving appointment attendance and adherence to treatment, and reducing risk of comorbidities and complications due to nutrition challenges (58–60).

Evaluation questions and hypotheses

The evaluation design of the YSHCN policy in the 2022 – 2027 1115(a) Medicaid Demonstration Waiver includes both implementation questions that focus on how the policy was implemented and research hypothesis/evaluation questions that focus on understanding the impact of this policy on YSHCN OHP members and their families or caregivers. Oregon proposes the following implementation questions and research hypotheses. These questions were generated in collaboration with OHA with input from interested parties.

YSHCN implementation question 1. How is the YSHCN policy being implemented?

- *YSHCN implementation question 1a.* What progress has been made towards implementing the YSHCN policy and what factors facilitated or impeded success?
- *YSHCN implementation question 1b.* How do OHA staff, and organizations who assist with enrollment, conduct outreach to the YSHCN population and what successes and barriers have they encountered?
- *YSHCN implementation question 1c.* What efforts did OHA and partners make to center equity in the identification of YSHCN? How effective were these efforts?

YSHCN implementation question 2. How were YSHCN enrolled in Medicaid under the new policy and what was their experience with the process?

- *YSHCN implementation question 2a.* How many YSHCN enroll in Medicaid over time?
- *YSHCN implementation question 2b.* Through what routes are YSHCN being identified and enrolled to Medicaid?
- *YSHCN implementation question 2c.* What is the experience of Medicaid enrollment for YSHCN and their families / caregivers?
- *YSHCN implementation question 2d.* Are there inequities in Medicaid enrollment under the YSHCN policy?

YSHCN implementation question 3. How did Oregon’s Coordinated Care Organizations (CCOs) and Fee For Service (FFS) program engage and support the newly defined YSHCN population of members?

- *YSHCN implementation question 3a.* How did engagement and support for this newly defined population differ across all 16 CCOs and FFS?
- *YSHCN implementation question 3b.* How, if at all, did coordination of care change for these young adults?
- *YSHCN implementation question 3c.* How did CCOs and FFS program seek to make their services for these members culturally and linguistically appropriate?
- *YSHCN implementation question 3d.* How were adult providers supported in providing care to these young adults?

- *YSHCN implementation question 3e.* What new policies or processes did CCOs and FFS program put in place to support this population?

YSHCN research hypothesis 1. The YSHCN policy will improve continuity of Medicaid coverage for YSHCN.

- *YSHCN evaluation question 1a.* What changes in rates of churn are observed after two years of YSHCN policy implementation?
- *YSHCN evaluation question 1b.* What changes in inequities in churn are observed after two years of YSHCN policy implementation?

YSHCN research hypothesis 2. The YSHCN policy will improve continuity of care for Medicaid-enrolled YSHCN.

- *YSHCN evaluation question 2a.* How does the YSHCN policy impact self-reported continuity of care for YSHCN OHP members?
- *YSHCN evaluation question 2b.* How does the YSHCN policy impact the experiences of providers, including both medical and social (e.g., navigators, social workers, traditional health workers) providers, in caring for YSHCN?
- *YSHCN evaluation question 2c.* How does the policy impact inequities in continuity of care for YSHCN OHP members?

YSHCN research hypothesis 3. The YSHCN policy will improve health care access and utilization for Medicaid-enrolled YSHCN.

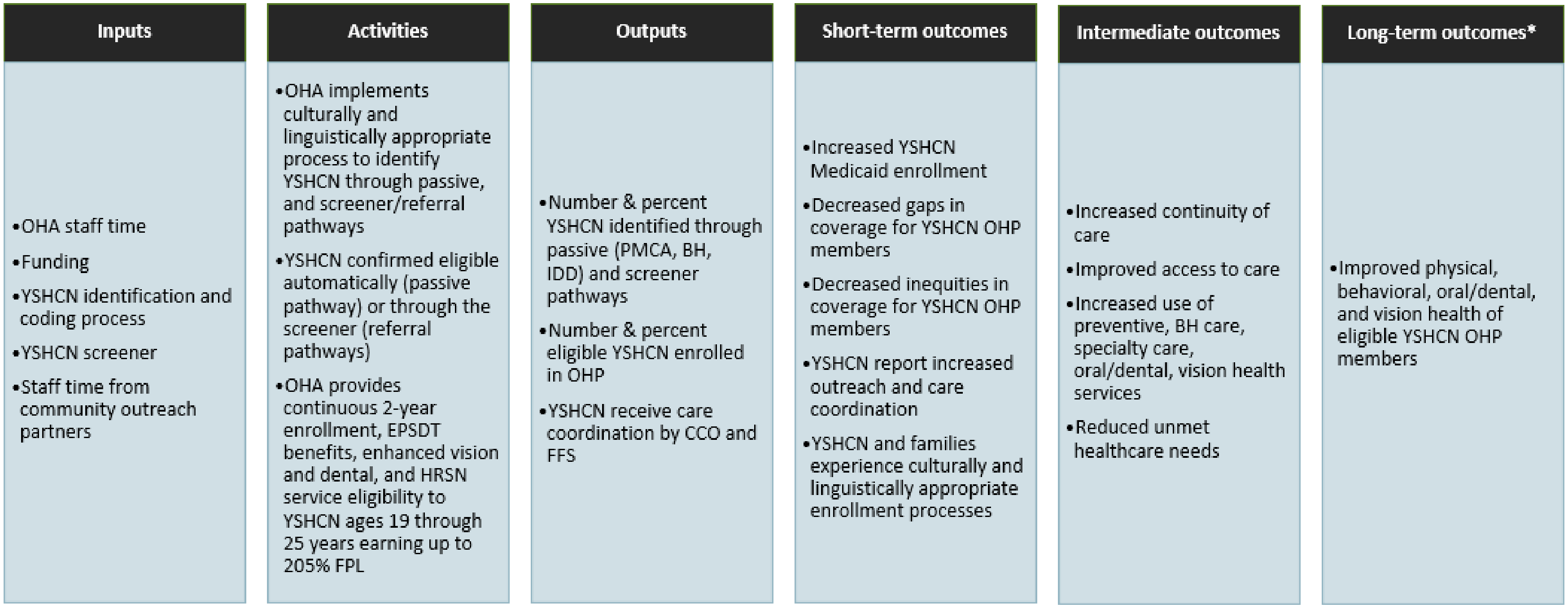
- *YSHCN evaluation question 3a.* How does the YSHCN policy impact self-reported access to and use of preventive and primary care for YSHCN OHP members?
- *YSHCN evaluation question 3b.* How does the YSHCN policy impact self-reported use of acute and costly care, especially potentially preventable emergency department visits and hospitalizations for YSHCN OHP members?
- *YSHCN evaluation question 3c.* How does the YSHCN policy impact self-reported access to and use of specialty care, including behavioral health care for YSHCN OHP members?
- *YSHCN evaluation question 3d.* How does the YSHCN policy impact self-reported access to and use of oral health care and vision benefits for YSHCN OHP members?
- *YSHCN evaluation question 3e.* How does the YSHCN policy impact inequities in health care access and utilization for YSHCN OHP members?

Of note, YSHCN are being included as a specific population to explore within certain evaluation questions of the CE and HRSN evaluation designs.

Logic model

The following logic model outlines the path through which the YSHCN policy is anticipated to increase YSHCN enrollment in Medicaid and improve outreach and care coordination (short-term outcome; zero to 12 months); improve health care continuity, access, and use or preventive services (intermediate outcomes; 12 to 24 months); and eventually improve health and decrease social needs (long-term outcome; beyond the evaluation timeline and scope). The policy is further anticipated to reduce inequities in these outcomes among YSHCN OHP members.

Figure 4.1. YSHCN logic model



Inputs	Activities	Outputs	Short-term outcomes	Intermediate outcomes	Long-term outcomes*
•OHA staff time •Funding •YSHCN identification and coding process •YSHCN screener •Staff time from community outreach partners	•OHA implements culturally and linguistically appropriate process to identify YSHCN through passive, and screener/referral pathways •YSHCN confirmed eligible automatically (passive pathway) or through the screener (referral pathways) •OHA provides continuous 2-year enrollment, EPSDT benefits, enhanced vision and dental, and HRSN service eligibility to YSHCN ages 19 through 25 years earning up to 205% FPL	•Number & percent YSHCN identified through passive (PMCA, BH, IDD) and screener pathways •Number & percent eligible YSHCN enrolled in OHP •YSHCN receive care coordination by CCO and FFS	•Increased YSHCN Medicaid enrollment •Decreased gaps in coverage for YSHCN OHP members •Decreased inequities in coverage for YSHCN OHP members •YSHCN report increased outreach and care coordination •YSHCN and families experience culturally and linguistically appropriate enrollment processes	•Increased continuity of care •Improved access to care •Increased use of preventive, BH care, specialty care, oral/dental, vision health services •Reduced unmet healthcare needs	•Improved physical, behavioral, oral/dental, and vision health of eligible YSHCN OHP members

*outside the timeline and scope of the evaluation

Approach overview table

The table below provides the research question; proposed outcomes measures; sample/population and comparison groups; data sources; and analytic methods for each of the three hypotheses listed above. Further details on the outcome measures, focus and comparison populations, data sources, and analytic methods are given in the methodology section following the table.

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 1. How is the YSHCN policy being implemented?				
Implementation question 1a. What progress has been made towards implementing the YSHCN policy, and what factors facilitated or impeded success?	- Description of progress on implementation plan - Description of successes and challenges - Description of barriers and facilitators	Sample: - OHA staff and contractors	Interviews	Qualitative analysis
Implementation question 1b. How do OHA staff, and organizations who assist with enrollment, conduct outreach to the YSHCN population, and what successes and barriers have they encountered?	- Description of outreach and communication efforts - Description of success and challenges - Description of barriers and facilitators	Sample: - Outreach staff - Application assisters - Community partners	Interviews	Qualitative analysis
Implementation question 1c. What efforts did OHA and partners make to center equity in the identification of YSHCN? How effective were those efforts?	- How was equity intentionally built into planning - Description of efforts used to center equity in YSHCN identification - Types of efforts used to center equity and description of their effectiveness	Sample: - Outreach staff - Application assisters - Community partners	Interviews	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 2. How were YSHCN enrolled in Medicaid under the new policy and what was their experience with the process?				
Implementation question 2a. How many YSHCN enroll in Medicaid over time?	- Total enrollment - New to Medicaid enrollment - Stand-alone eligibles enrollment - Wrap around	Sample: YSHCN OHP members	ONE Eligibility system	Descriptive analysis (e.g. means and percentages) Trends over time
Implementation question 2b. Through what routes are YSHCN being identified and enrolled to Medicaid?	Number and proportion of YSHCN identified via passive (e.g. PMCA, BH, IDD) and active (screener) pathways	Sample: YSHCN OHP members	ONE Eligibility system	Descriptive analysis (e.g. means and percentages) Trends over time
Implementation question 2c. What is the experience of Medicaid enrollment for YSHCN and their families / caregivers?	- Experience of outreach and education efforts - Description of facilitators or barriers to enrollment - Description of the cultural and linguistic appropriateness of the screener, outreach, and education efforts	Sample: YSHCN OHP members and their families / caregivers	Interviews	Qualitative analysis
Implementation question 2d. Are there inequities in Medicaid enrollment under the YSHCN policy?	- Routes by which YSHCN are identified and enrollment outcomes	Groups (disaggregated to the greatest degree possible): - Sexual orientation and gender identity	ONE Eligibility system Oregon	Comparative statistics for group differences

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 2. How were YSHCN enrolled in Medicaid under the new policy and what was their experience with the process?				
		- Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Enrollment path (PMCA, BH, IDD, self-referral) - Medical complexity - Income/New to Medicaid	Medicaid enrollment and claims REALD and SOGI Data Repository	

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 3. How did Oregon's CCOs and FFS program engage and support the newly defined YSHCN population of members?				
Implementation question 3a. How did engagement and support for this newly defined population differ across all 16 CCOs and FFS?	- Description of approaches CCOs and FFS used to engage YSHCN - Description of approaches CCOs and FFS used to support YSHCN	Sample: - CCO staff and representatives - OHA staff overseeing Medicaid FFS program and/or any Third Party Contractors (TPCs)	Interviews	Qualitative analysis
Implementation question 3b. How, if at all, did coordination of	- Description of care coordination changes	Sample: - CCO staff and representatives - OHA staff overseeing	Interviews	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 3. How did Oregon's CCOs and FFS program engage and support the newly defined YSHCN population of members?				
care change for these young adults?		Medicaid FFS program and/or any TPCs		
Implementation question 3c. How did CCOs and the FFS program seek to make their services for these members culturally and linguistically appropriate?	- Description of cultural and linguistic appropriateness of services provided across CCOs and FFS - Description of approach used for creating culturally and linguistically appropriate services	Sample: - CCO staff and representatives - OHA staff overseeing Medicaid FFS program and/or any TPCs	Interviews	Qualitative analysis
Implementation question 3d. How were adult providers supported in providing care to these young adults?	- Description of types of supports provided to providers - Experience providing care under YSHCN benefit	Sample: - CCO staff and representatives - OHA staff overseeing Medicaid FFS program and/or any TPCs - Health care providers working with YSHCNs, including medical and social providers (e.g., navigators, social workers, traditional health workers)	Interviews	Qualitative analysis
Implementation question 3e. What new policies or processes did CCOs and FFS	- Description of policies and processes put in place by CCOs and FFS	Sample: - CCO staff and representatives - OHA staff overseeing	Interviews	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Implementation question 3. How did Oregon’s CCOs and FFS program engage and support the newly defined YSHCN population of members?				
program put in place to support this population?		Medicaid FFS program and/or any TPCs		

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 1. The YSHCN policy will improve continuity of Medicaid coverage for YSHCN.				
Evaluation question 1a. What changes in rates of churn are observed after two years of YSHCN policy implementation?	- Renewal rates - Rates of gaps in Medicaid coverage - Length of gaps in Medicaid coverage	Sample: YSHCN OHP members Groups: - < 139% FPL - 139% - 205% FPL	Oregon Medicaid enrollment	Descriptive analysis (e.g. means and percentages) Trends over time
Evaluation question 1b. What changes in inequities in churn are observed after two years of YSHCN policy implementation?	- Churn outcomes listed above	Groups (disaggregated to the greatest degree possible): - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Enrollment path (PMCA, BH, IDD, self-referral) - Medical complexity	Oregon Medicaid enrollment REALD and SOGI Data Repository	Comparative statistics for group differences

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 2. The YSHCN policy will improve continuity of care for Medicaid-enrolled YSHCN.				
Evaluation question 2a. How does the YSHCN policy impact self-reported continuity of care for YSHCN OHP members?	- Description of experience of continuity of care and transfer of care - Continuity of primary care - Continuity of specialty care - Continuity of BH care - Proportion establishing care with an adult health care provider	Sample: YSHCN OHP members and their families / caregivers Sample: YSHCN OHP members	Interviews Oregon Medicaid enrollment and claims data	Qualitative analysis Descriptive analysis (e.g. means and percentages)
Evaluation question 2b. How does the YSHCN policy impact the providers experiences in caring for YSCHN?	- Ability to refer YSHCN to other specialists as needed - Ability to support shared decision making with YSHCN - Ability of clinic to provide care coordination for YSHCN - Satisfaction with the ability to provide care for YSHCN	Sample: Health care providers working with YSHCNs, including medical and social providers (e.g., navigators, social workers, traditional health workers)	Interviews	Qualitative analysis
Evaluation question 2c. How does the YSHCN policy impact inequities in continuity of care for YSHCN OHP members?	- All continuity of care outcomes listed in Evaluation Question 2a above	Sample: YSHCN OHP members and their families / caregivers Sample: YSHCN OHP members	Interviews Oregon Medicaid enrollment	Qualitative analysis Comparative statistics for

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 2. The YSHCN policy will improve continuity of care for Medicaid-enrolled YSHCN.				
		Groups (disaggregated to the greatest degree possible): - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Enrollment path (PMCA, BH, IDD, self-referral) - Medical complexity	and claims data REALD and SOGI Data Repository	group differences

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The YSHCN policy will improve health care access and utilization for Medicaid-enrolled YSHCN.				
Evaluation question 3a. How does the YSHCN policy impact self-reported access to and use of preventive and primary care for YSHCN OHP members?	- Description of access to care and unmet needs - Description of use of preventive and primary care - Description of shared decision making	Sample: YSHCN OHP members and their families / caregivers	Interviews	Qualitative analysis
Evaluation question 3b. How does the YSHCN policy impact use of acute and costly care, especially potentially	- Description of use of acute care and unmet needs - Description of types of	Sample: YSHCN OHP members and their families / caregivers	Interviews	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The YSHCN policy will improve health care access and utilization for Medicaid-enrolled YSHCN.				
preventable emergency department visits and hospitalizations for YSHCN OHP members?	acute care used			
Evaluation question 3c. How does the YSHCN policy impact self-reported access to and use of specialty care, including BH care for YSHCN OHP members?	- Description of access to care and unmet - Description of use of specialty care - Description of shared decision making - Disease-specific management - Follow-up after Emergency Department visit for mental illness - Follow-up after hospitalization for mental illness - Medication adherence	Sample: YSHCN OHP members and their families / caregivers	Interviews	Qualitative analysis
Evaluation question 3d. How does the YSHCN policy impact self-reported access to and use of oral health care and vision benefits for YSHCN OHP members?	- Description of access to care and unmet needs - Description of use of oral health care and vision benefits	Sample: YSHCN OHP members and their families / caregivers	Interviews	Qualitative analysis
Evaluation question 3e. How does the YSHCN policy impact inequities in health care access	- All health care access and utilization outcomes listed above	Sample: YSHCN OHP members and their families / caregivers	Interviews	Qualitative analysis

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Hypothesis 3. The YSHCN policy will improve health care access and utilization for Medicaid-enrolled YSHCN.				
and utilization for YSHCN OHP members?		Groups (disaggregated to the greatest degree possible): - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g. urban, rural, frontier) - Disability status - Enrollment path (PMCA, BH, IDD, self-referral) - Medical complexity		

Methodology

Evaluation design

The evaluation of the YSHCN policy will use a mixed-methods study design, relying on both quantitative and qualitative data collection and analysis to assess YSHCN implementation questions and research hypotheses. YSHCN implementation question 1 will use interviews with staff implementing the YSHCN policy and conducting outreach and education to understand progress, barriers, and facilitators to implementation as well as exploring how equity was centered in their processes. These interviews will include OHA staff, community partners, and others assisting with outreach and enrollment. YSHCN implementation question 2 will use interviews with YSHCN OHP members and their families or caregivers, combined with data from the Oregon ONE Eligibility system and Medicaid enrollment, to assess how the YSHCN policy impacted enrollment, enrollment experience, and any inequities in enrollment. YSHCN implementation question 3 will use interviews with CCO staff and representatives, OHA staff overseeing the Medicaid FFS program (and/or any third-party contractors), and health care providers working with YSHCN, to understand efforts being made and policies and procedures being used by CCOs and FFS program to support and engage the YSHCN population.

The proposed path by which the YSHCN policy impacts health and health care for eligible OHP members is through increased continuity and expansion of coverage, which in turn leads to improved continuity of care. YSHCN research hypothesis 1 will test this through the use of Medicaid enrollment data to understand the impact of the policy on continuity of Medicaid coverage; YSHCN research hypothesis 2 will explore the impact on continuity of care through interviews with YSHCN OHP members and their families / caregivers as well as some descriptive analysis of health care claims, interviews with health care providers to explore how the YSHCN policy impacts their experience providing care, and examination of experience of inequities in continuity of care. Finally, YSHCN research hypothesis 3 will use interviews with YSHCN OHP members and their families / caregivers to qualitatively assess the impact of this policy on health care utilization more broadly, as well as inequities in health care.

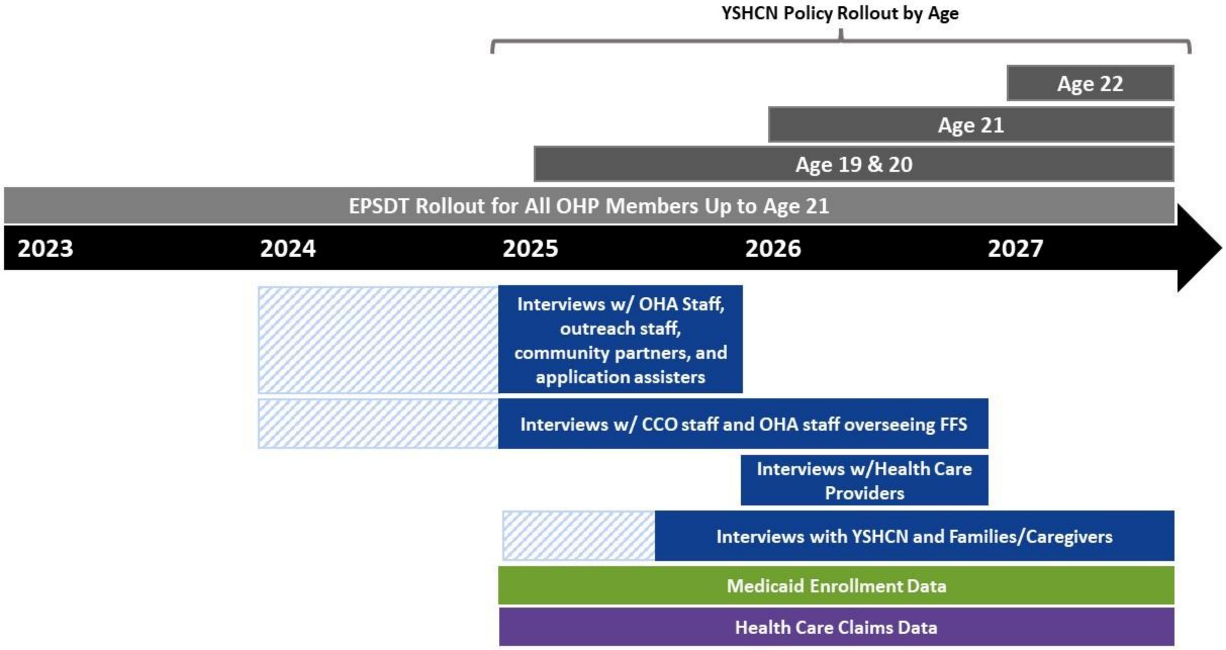
The three YSHCN implementation questions and three YSHCN research hypotheses will use a range of analytic methods, including thematic analysis for the interviews, descriptive statistics, analysis of trends over time, and comparative statistics for group differences for the quantitative measures. More detail on the analytic techniques can be found in the analysis section below.

Evaluation period

The evaluation period for the YSHCN policy will begin in 2025, when the policy first goes into effect, and ends in 2027 when the demonstration period concludes. An additional 18 months beyond the waiver period will be used for analysis and dissemination. In Figure 4.2, we depict the timing of data collection for YSHCN implementation and evaluation questions during the evaluation period. The figure shows the timing of actual data collection in solid colors, and the period which data will cover in striped colors. The 18 months beyond the waiver period will be used for analysis and dissemination.

- **Interviews with OHA staff, community partners, and others.** Information on implementation and outreach experience will be collected through interviews with OHA staff and outreach staff, community partners, and application assisters conducted in 2025. Interviewees will be asked to reflect on their experiences back to 2024.
- **Interviews with CCO staff and OHA staff overseeing FFS.** The perspective of CCO staff and representatives and OHA staff overseeing Medicaid FFS programs will be collected through interviews. These interviews will be conducted in 2025 and 2026. Interviewees will be asked to reflect on changes that have been made to support the YSHCN population.
- **Interviews with health care providers.** The health care provider perspective on the policy will be collected through interviews with health care providers who work with YSHCN including medical and social care providers (e.g., navigators, social workers, traditional health workers). These interviews will be conducted in 2026, after the policy has had a full year of implementation.
- **Interviews with YSHCN and their families/caregivers.** The experience of YSHCN OHP members and their families and caregivers will be explored through interviews conducted approximately every six months from mid-2025 until 2027.
- **Administrative data.** Administrative data, including Medicaid enrollment and claims data and information on YSHCN enrollment from the Oregon ONE Eligibility system will be collected beginning with implementation in 2025 through the end of the demonstration period.

Figure 4.2. Evaluation period for the YSHCN policy of Oregon's 1115(a) Medicaid Demonstration Waiver.



Focus and comparison populations

The YSHCN policy applies to young adults age 19 through 25 in households earning up to 205% FPL who have a qualifying health care condition or risk factor. Rollout of the policy will occur in stages, with 19- and 20-year-olds becoming eligible in January 2025, and older ages becoming eligible in subsequent years.

A variety of different populations will be engaged to understand the implementation and outcomes for the policy, including OHA staff responsible for implementing the new policy, OHA staff overseeing Medicaid FFS programs, community partners or application assisters responsible for supporting YSHCN, CCO staff and outreach staff, and YSHCN OHP members. The population focus and size will vary based on the specific data being captured to address each implementation or evaluation question. Below we provide a breakdown of these populations by research question.

YSHCN implementation question 1. How is the YSHCN policy being implemented?

- **OHA Staff and contractors, including outreach staff and application assisters.** The independent evaluator will collaborate with OHA to identify staff most appropriate for interviews around implementation of the YSHCN policy. These staff will likely include a combination of those who are involved in technical and logistical aspects of implementation, review of diagnosis and claims data to flag individuals eligible for the YSHCN policy, management of the information in the ONE Eligibility system, administering the financial aspects of the policy, and/or who are responsible for outreach and education efforts or supporting YSHCN in completing and submitting applications for Medicaid benefits. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 30 interviews to support reaching saturation.

- **Community partners, including case managers.** The independent evaluator will collaborate with OHA to identify community partners most appropriate for interviews around outreach and education related to the YSHCN policy implementation. Community partners include partners contracted with OHA to provide outreach, health care, and social services; for example, health care providers, non-profits, schools, or faith-based organizations. Community partners also include community-based organizations who serve the YSHCN population, as well as any specific staff, such as case managers, employed by either community or governmental partners to support YSHCN. Other partners may include state agencies that work with YSHCN such as Aging and People with Disabilities, ODDS and Child Welfare.

YSHCN implementation question 2. How were YSHCN enrolled in Medicaid under the new policy and what was their experience with the process?

- **YSHCN OHP members.** For outcomes derived from Medicaid enrollment data, the only eligibility criterion for the evaluation is that the individual be enrolled in Medicaid under the YSHCN policy during the demonstration period.
- **YSHCN interviewees and their families/caregivers.** The independent evaluator will identify individuals enrolled in Medicaid under the YSHCN policy and their family members/caregivers or legally authorized representatives to engage in interviews. Interviewees will be selected to ensure representation across different demographic groups, different health conditions or other qualifying factors, and different routes to Medicaid enrollment. The final number of interviews will be determined by the independent evaluator, but we recommend at least 40 interviews per round to support reaching saturation. Focus groups may also provide an option for engaging YSHCN and their families/caregivers.

YSHCN implementation question 3. How did Oregon’s CCOs and FFS program engage and support the newly defined YSHCN population of members?

- **CCO staff and OHA staff overseeing FFS programs (or TPCs).** The independent evaluator will collaborate with OHA and CCOs to identify staff most appropriate for interviews around efforts being made to support and engage the YSHCN population. These staff will likely include a combination of those who are involved in and responsible for policy implementation, care coordination, member outreach, and provider outreach. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 30 interviews to support reaching saturation.
- **Health care providers.** The independent evaluator will identify health care providers, both medical and social (e.g., navigators, social workers, traditional health workers) who

support YSHCN OHP members to engage in interviews about their experience receiving support from CCOs and FFS to provide care to YSHCN. This will include primary, specialty, and behavioral health care providers, as well as clinic social workers or traditional health workers, whose work with YSHCN OHP members may be impacted by the sustained Medicaid coverage. The final number of interviews will be determined by the independent evaluator in collaboration with OHA, but we recommend at least 20 interviews to support reaching saturation.

YSHCN research hypothesis 1. The YSHCN policy will improve continuity of Medicaid coverage for YSHCN.

- **YSHCN OHP members.** For outcomes derived from Medicaid enrollment data, the only eligibility criterion for the evaluation is that the individual be enrolled in Medicaid under the YSHCN policy during the demonstration period. Individuals will further be divided into groups based on income (such as those whose household earns less than 139% FPL, and therefore would have still been eligible for adult Medicaid without the YSHCN policy; and those whose household earns 139% to 205% FPL, and so are only eligible for adult Medicaid because of the new YSHCN policy) as well as other relevant characteristics as possible (such as former foster youth). Further population disaggregation will be included to explore inequities in outcomes.

YSHCN research hypothesis 2. The YSHCN policy will improve continuity of care for Medicaid-enrolled YSHCN.

- **YSHCN OHP members.** For outcomes derived from Medicaid claims data, the only eligibility criterion for the evaluation is that the individual be enrolled in Medicaid under the YSHCN policy during the demonstration period.
- **YSHCN interviewees and their families/caregivers.** The independent evaluator will identify individuals enrolled in Medicaid under the YSHCN policy and their family members/caregivers or legally authorized representatives to engage in interviews. Interviewees will be selected to ensure representation across different demographic groups, different health conditions or other qualifying factors, and different routes to Medicaid enrollment. The final number of interviews will be determined by the independent evaluator, but we recommend at least 40 interviews per round to support reaching saturation.
- **Health care providers.** The independent evaluator will identify health care providers, both medical and social (e.g., navigators, social workers, traditional health workers) who support YSHCN OHP members to engage in interviews about their experience with the YSHCN policy. This will include primary, specialty, and behavioral health care providers, as well as clinic social workers or traditional health workers, whose work with YSHCN OHP members may be impacted by the sustained Medicaid coverage and access to HRSN services. The final number of interviews will be determined by the independent

evaluator in collaboration with OHA, but we recommend at least 20 interviews to support reaching saturation.

YSHCN research hypothesis 3. The YSHCN policy will improve health care access and utilization for Medicaid-enrolled YSHCN.

- **YSHCN interviewees and their families/caregivers.** Same as described in YSHCN research hypothesis 2.

Measures

The tables below list the descriptions and data sources for proposed measures to be included in the evaluation. The independent evaluator will provide measure specifications in the interim and summative reports for each quantitative measure used: this will include numerator and denominator definitions.

YSHCN implementation question 1. How is the YSHCN policy being implemented? Measures for the evaluation of staff and partners experience with the implementation of the YSHCN policy will come from interviews.

Data source	Measure
Interviews with OHA staff and contractors responsible for implementation	***Interview domains*** ▶ Description of progress made on implementation ▶ Challenges and barriers encountered, and how they were overcome ▶ Facilitating factors and successes ▶ How was equity intentionally built into planning
Interviews with outreach staff, application assisters, and community partners	***Interview domains*** ▶ Outreach and communication efforts around the YSHCN policy ▶ Perceived facilitators or barriers to enrollment for YSHCN ▶ Types of efforts to center equity in YSHCN identification ▶ Effectiveness of equity efforts

YSHCN implementation question 2. How were YSHCN enrolled in Medicaid under the new policy and what was their experience with the process? Information on the process of, and YSHCN OHP members experience, with enrollment will be derived from three distinct data sources: the ONE Eligibility system, Medicaid enrollment and claims data, and interviews with YSHCN OHP members and their families/caregivers or legally authorized representative.

Data source	Measure
ONE Eligibility system	▶ *Routes of enrollment.* calculated as the number and proportion of all YSHCN OHP members enrolled through each pathway (identified through passive – e.g. PMCA, BH, IDD - and screener pathways) and per calendar year.
Medicaid enrollment data (and REALD SOGI data repository)	▶ *Total Medicaid enrollment.* calculated as the total number of YSHCN enrollees in Medicaid per calendar year. ▶ *New to Medicaid enrollment.* calculated as the total number of new YSHCN OHP members who were not previously enrolled in Medicaid per year. ▶ *Stand-alone eligibles enrollment.* calculated as the total number of YSHCN OHP members who were only eligible due to the YSHCN policy (e.g., earning 139% to 205% FPL, not covered through other programs such as Child Welfare, etc.). ▶ *Wrap around enrollment.* calculated as the total number of YSHCN OHP members who already had access to OHP but will received additional benefits under the demonstration (such as EPSDT, enhanced vision/dental, HRSN).
Interviews with YSHCN OHP members and their family/caregivers	***Interview domains*** ▶ Experience of outreach and education efforts ▶ Facilitators or barriers to enrollment ▶ Cultural and linguistic appropriateness of the screener, outreach, and education efforts

YSHCN implementation question 3. How did Oregon's CCOs and FFS program engage and support the newly defined YSHCN population of members? Information on the process of CCOs and FFS supporting and engaging the YSHCN population will be derived from interviews with CCO staff and representatives, as well as health care providers working with YSHCN.

Data source	Measure
Interviews with CCO staff and OHA staff overseeing FFS programs (or TPCs)	***Interview domains*** ▶ Engagement and support provided for YSHCN population ▶ Supports offered to providers caring for YSHCN under the benefit ▶ Care coordination changes ▶ Cultural and linguistic appropriateness of services provided

	▶ Policies and processes put in place to support the YSHCN population
Interviews with health care providers	***Interview domains*** ▶ Types of supports provided to providers by CCOs and FFS ▶ Experience of providing care under YSHCN benefit

YSHCN research hypothesis 1. The YSHCN policy will improve continuity of Medicaid coverage for YSHCN. Measures of continuity of Medicaid coverage will come from Medicaid enrollment and claims data.

Data source	**Measure**
Medicaid enrollment and claims data (and REALD SOGI data repository)	▶ *Renewal rates.* calculated as the proportion of YSHCN OHP members who re-enroll in Medicaid at the end of their first 2-year CE period. ▶ *Rates of gaps in Medicaid coverage.* Proportion of YSHCN OHP members who experience a gap in Medicaid coverage; that is, they do not renew on time, but then re-enroll in Medicaid within 6 months of disenrolling. ▶ *Length of gaps in Medicaid coverage.* Among YSHCN OHP members who experience churn, the average length of time before re-enrolling.

YSHCN research hypothesis 2. The YSHCN policy will improve continuity of care for Medicaid-enrolled YSHCN. Measures of continuity of care will come from Medicaid enrollment and claims data and interviews with YSHCN OHP members and their families / caregivers or legally authorized representative. Measures of the provider experience providing care for YSHCN will come from interviews with health care providers.

Data source	**Measure**
Medicaid enrollment and claims data (and REALD SOGI data repository)	▶ *Proportion establishing care with an adult health care provider.* Calculated as the proportion of YSHCN OHP members who have at least one visit with an adult health care provider during the demonstration period.
Interviews with YSHCN OHP members and their family/caregivers	***Interview domains*** ▶ Experience of continuity of care and transfer of care (including primary, specialty, and BH care)
Interviews with health care providers	***Interview domains*** ▶ Ability to refer YSHCN to other specialists as needed

	▶ Ability to support shared decision making with YSHCN ▶ Ability of clinic to provide care coordination for YSHCN ▶ Satisfaction with the ability to provide care for YSHCN

YSHCN research hypothesis 3. The YSHCN policy will improve health care access and utilization for Medicaid-enrolled YSHCN. Measures of improvements to health care access and utilization will come from interviews with YSHCN OHP members and their families/caregivers or legally authorized representative.

Data source	Measure
Interviews with YSHCN OHP members and their family/caregivers	***Interview domains*** ▶ Access to care and unmet needs (including primary, specialty, and BH care) ▶ Types of health care used

Data sources

This section describes the primary and secondary data sources needed for the YSHCN evaluation.

Primary data collection

Interviews. Interviews will be conducted with five distinct groups throughout the evaluation period: OHA staff implementing the YSHCN policy; OHA staff conducting outreach and education about the YSHCN policy, including community partners and application assisters; health care providers working with YSHCN; CCO Staff and OHA Staff Overseeing FFS Programs (or TPCs); and YSHCN OHP members and their families or caregivers. The independent evaluator will determine the key elements of each of these qualitative data collections efforts, including selecting the number of and sampling frame for interviewees, designing the interview guide to reflect the implementation and evaluation questions of interest, and setting the location and timing of each interview.

Secondary data

Information on YSHCN policy eligibility determination route. Information on the route of eligibility determination will be tracked in the ONE Eligibility system.

- *ONE Eligibility system.* The ONE Eligibility system is a platform meant to simplify the application process for Oregon residents seeking medical, food, cash, and childcare benefits. The ONE Eligibility system gathers various information about the applicant, including demographic information, household income, current benefits, and household composition. Individuals who are flagged as eligible under the YSHCN policy through review of data from ODDS or Oregon Medicaid Management Information System (MMIS) will have this information recorded in the ONE Eligibility system; the ONE

Eligibility system will also automatically prompt individuals ages 19 to 25 to complete the YSHCN screener to determine eligibility.

Medicaid enrollment and health care utilization data. Information on Medicaid enrollment and health care utilization can come from a variety of data sources. Enrollment information can be found in MMIS. Health care utilization information can be found in MMIS.

- *Oregon Medicaid Management Information System (MMIS).* MMIS in Oregon is a comprehensive database that contains detailed, timely, year-over-year data about Medicaid enrollees and the health care services paid by Medicaid.

Analytic methods

Qualitative analysis

The independent evaluator will be responsible for solidifying the qualitative analysis approach used in this evaluation. However, we anticipate the following steps: creating structured interview guides that cover key topics of interest; translating guides into multiple languages as needed; planning for interpretation; assessing the validity of the guides through cognitive interviews with individuals selected from the study population; transcribing and coding all interviews or focus groups, with double-coding for accuracy; and using thematic analysis to organize codes into categories, examine patterns, and transform them into themes.

Quantitative analysis

The following quantitative analysis techniques will be used to answer the various evaluation questions above.

Descriptive statistics. All implementation and evaluation questions that require quantitative analysis will begin with descriptive statistics, for example: means, medians, or percentages; or measures of distribution and spread, such as the interquartile range. For some questions, descriptive statistics may be the most appropriate quantitative analytic technique, and therefore the only ones used. However, most implementation and evaluation questions using quantitative techniques will additionally rely on the following list of inferential statistics.

Trends over time. The evaluation questions that look at trends over time focus only on the period after the implementation of the YSHCN policy; that is, they do not include pre-period data in the analysis. The two possible analyses are a pooled cross-section analysis, which compares cross-sections of the study population at different points in time, and a time series analysis of panel data, which follows the same individuals over time. Given that we expect individuals in the study population to change over time, the pooled cross-section analysis is likely most appropriate. Implementation and evaluation questions that may use trends over time include:

- **YSHCN implementation question 2b.** Through what routes are YSHCN being identified and enrolled in Medicaid?

- **YSHCN evaluation question 1a.** What changes in rates of churn are observed after two years of YSHCN policy implementation?

Comparative statistics for disaggregated groups. For evaluation questions assessing the impact of the YSHCN policy on inequities, differences between groups can be assessed by tests of means or proportions or the inclusion of interaction terms in regression models. Example question that may use this approach include:

- **YSHCN implementation question 2d***.* Are there inequities in Medicaid enrollment under the YSHCN policy?

Methodological limitations

Methodological limitations inherent in the YSHCN evaluation design include: decisions necessary to the implementation of the policy that will prevent answering specific questions of interest; concerns about the validity of benchmarks or the comparison group for statistical inference; and known equity limitations in design, available data, and analytic techniques.

Implementation concerns

Oregon is implementing the YSHCN policy as a staged rollout, starting with 19 and 20 -year-olds in 2025. While this strategy has important benefits for ensuring that the state infrastructure can support the expansion of coverage and provision of new benefits to this group, it also means that not all age groups will be enrolled under the YSHCN policy during the evaluation period. In particular, the group for whom the YSHCN policy creates the most substantial difference in Medicaid eligibility and services – namely, 22 through 25-year-olds who earn between 139% and 205% FPL – will have at most one year of coverage during the demonstration period. While it is therefore possible to explore the impact of the policy on this population for some limited outcomes, such as enrollment rates, there is not enough time in the evaluation period to assess the impact on churn, continuity of care and care transitions, or health care utilization more broadly.

Analytic concerns

The evaluation questions described for YSHCN are being answered qualitatively and descriptively. This is, in part, because of the lack of availability of appropriate comparison groups. Below we describe comparison groups that were considered and their limitations. For qualitative data, there are potential limitations related to recall and desirability bias. Despite robust plans for interviews, it is still possible that certain context will be left out of the evaluation. Results from the interviews may not be representative of the full population, but the interviewee sampling approach will aim to reflect diverse demographics and characteristics to capture varying experiences and perspectives.

Comparison population. There is no viable pre-period comparison population for understanding continuity of Medicaid coverage among YSHCN. This is because YSHCN with incomes over 138% FPL had no path to continued coverage after age 18 before the current demonstration, outside commercial plans. Understanding transition to commercial coverage are beyond the scope of the evaluation. We also considered other comparison populations, particularly older YSHCN for whom the staged rollout prevents enrollment (i.e. those 20 years or older in 2025) and YSHCN Medicaid members in other states. However, these groups would only be on Medicaid if they earned less than 139% FPL, and previous research has indicated that socioeconomic status is a substantial driver of access to health care for YSHCN (54,61), suggesting that this group would not be comparable to the YSHCN OHP members earning 139% to 205% FPL. Comparisons to other states would be further exacerbated by differences in policy and cultural environments between Oregon and those states that may impact YSHCN.

Chapter 5. Cost and sustainability

Evaluation questions and hypotheses

Assessing the intended and unintended effects of the above policies on Oregon's costs is critically important to ensure sustainability of the demonstration. Costs are considered in three categories: the administrative costs of implementing and operating the demonstration; health service expenditures, including expenditures on HRSN services; and uncompensated care for providers, including Medicaid shortfalls. The effects of the demonstration on these cost categories, and the implications of those effects for demonstration sustainability, will be considered within the context of Oregon's goals and value judgements. The state assumes that costs will initially increase for specific populations due to the expansion of eligibility and provision of HRSN services, and that any potential overall cost savings to the state may be longer-term, occurring after the 5-year time period of the demonstration.

The evaluation design of the cost and sustainability of the demonstration includes questions suggested by the Centers for Medicare & Medicaid Services (CMS) in evaluation guidance that focus on the costs of providing services to Oregon Health Plan (OHP) members, financial effects of the demonstration on providers, and administrative costs associated with demonstration startup and ongoing operations. Oregon proposes the following research questions and hypotheses:

Cost and sustainability research hypothesis 1. Continuous eligibility (CE) redeterminations are anticipated to decrease certain administrative costs. However, overall administrative costs to the state and Medicaid partners will increase. This increase is due primarily to the provision of new services under the HRSN policy, and the investment in HRSN infrastructure in the form of DSHP-financed community capacity building funds (CCBF) grant program.

- **Cost and sustainability research question 1.** What are the administrative costs[2] to implement and operate the demonstration?

Cost and sustainability research hypothesis 2. The demonstration will increase health expenditures in the short-term, due to both an expansion of eligibility to new populations and the provision of additional (HRSN) services; and then ultimately decrease per capita health expenditures in the long-term as increased access to care and addressing health-related social needs (HRSN) result in a decrease in acute and costly care such as emergency department visits and inpatient stays.

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[2] Per CMS guidance, administrative costs include "the cost of (1) contracts or contract amendments to implement demonstration policies, as well as those for monitoring and evaluation, and (2) staff time equivalents required to implement, administer, and communicate with beneficiaries about demonstration policies, such as premium collection, health behavior incentives, and/or community engagement requirements. Estimates of administrative costs should include Medicaid agency staff time for those hired to support the demonstration, as well as time redirected to the demonstration from other Medicaid operations in whole or in part… States may also need to include managed care administrative costs… States should also consider costs or cost savings accruing to other state agencies that partner with Medicaid to implement and operate the demonstration."

- **Cost and sustainability research question 2.** What are the short- and long-term effects of eligibility and coverage policies on health service expenditures, including HRSN service expenditures?

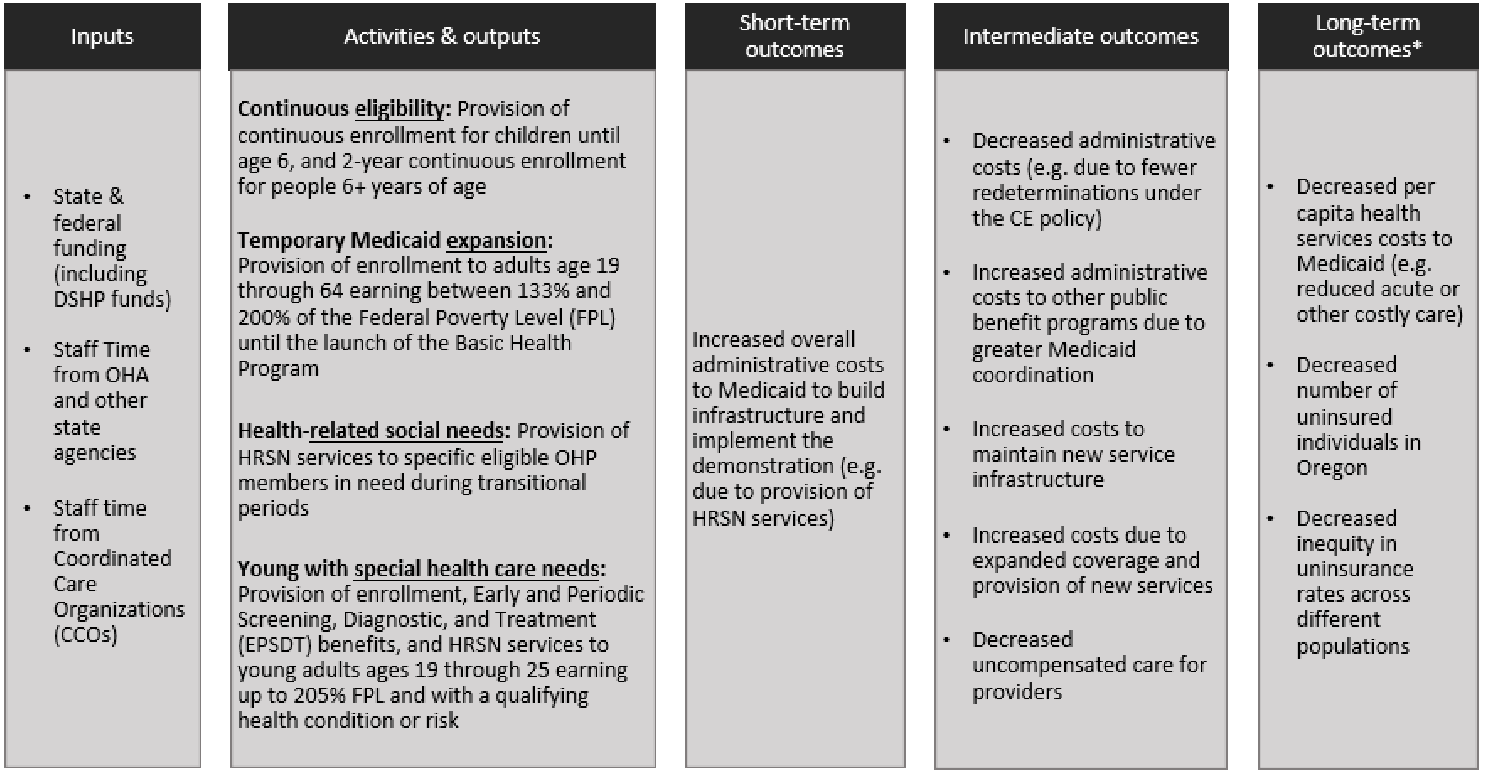
Cost and sustainability research hypothesis 3. The demonstration will reduce total uncompensated care for providers by expanding eligibility to new populations, thereby reducing the number of uninsured individuals in Oregon; and by reducing hospitalizations, thereby reducing uncompensated care provided by hospitals.

- **Cost and sustainability research question 3.** What are the impacts of eligibility and coverage policies on provider uncompensated care costs?

Logic model

The following logic model outlines the path through which the demonstration is anticipated to increase the administrative costs to the state (short-term outcomes; first few years of the demonstration depending on timing of rollout), increase more immediate health services expenditures due to expanding eligibility and providing HRSN services and maintaining new infrastructure while decreasing uncompensated care to providers (intermediate outcomes; the first few years after the benefit has been implemented), and then ultimately reduce longer-term health expenditures as increased access to care and addressing HRSN results in a decrease in acute and costly care (long-term outcomes, beyond the scope of this evaluation).

Figure 5.1. Cost and sustainability logic model



Inputs

- State & federal funding (including DSHP funds)
- Staff Time from OHA and other state agencies
- Staff time from Coordinated Care Organizations (CCOs)

Activities & outputs

Continuous eligibility: Provision of continuous enrollment for children until age 6, and 2-year continuous enrollment for people 6+ years of age

Temporary Medicaid expansion: Provision of enrollment to adults age 19 through 64 earning between 133% and 200% of the Federal Poverty Level (FPL) until the launch of the Basic Health Program

Health-related social needs: Provision of HRSN services to specific eligible OHP members in need during transitional periods

Young with special health care needs: Provision of enrollment, Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefits, and HRSN services to young adults ages 19 through 25 earning up to 205% FPL and with a qualifying health condition or risk

Short-term outcomes

Increased overall administrative costs to Medicaid to build infrastructure and implement the demonstration (e.g. due to provision of HRSN services)

Intermediate outcomes

- Decreased administrative costs (e.g. due to fewer redeterminations under the CE policy)
- Increased administrative costs to other public benefit programs due to greater Medicaid coordination
- Increased costs to maintain new service infrastructure
- Increased costs due to expanded coverage and provision of new services
- Decreased uncompensated care for providers

Long-term outcomes*

- Decreased per capita health services costs to Medicaid (e.g. reduced acute or other costly care)
- Decreased number of uninsured individuals in Oregon
- Decreased inequity in uninsurance rates across different populations

*outside the timeline and scope of the evaluation

Approach overview table

The table below provides the proposed outcomes measures; sample and comparison groups; data sources; and analytic methods for the research questions listed above. Further details are given in the methodology section following the table.

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
Research question 1. What are the administrative costs to implement and operate the demonstration?	Administrative costs of demonstration implementation, including DSHP-financed investments in HRSN infrastructure (i.e., CCBF grant program) Administrative cost of ongoing demonstration operation Administrative costs incurred by state agencies partnering with Medicaid	N/A	State documents: - State reporting on administrative costs - CCO Contracts and Contract Amendments CCBF grant program documentation Interviews with staff from the Oregon Health Authority (OHA), other state agencies, and CCOs	Descriptive analysis of administrative costs Document review and analysis Qualitative analysis of interviews
Research question 2. What are the short- and long-term effects of eligibility and coverage policies on health service expenditures, including HRSN service expenditures?	Total health service expenditures for demonstration population PMPM health service expenditures Health service expenditures for specific types of utilization	Subgroups: - HRSN services recipients - YSHCN Potential comparisons: - OHP members enrolled before	Medicaid claims APAC Payment Arrangement File CCO financial reporting (Exhibit L)	Descriptive analysis Comparative statistics: - Pre-post analysis - Difference-in-

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
	Total expenditures for HRSN services PMPM expenditures of HRSN services Total expenditures of each type of HRSN service	the demonstration - Medicaid members from other states not operating a similar demonstration Groups disaggregated to the greatest degree possible: - Age - Sexual orientation and gender identity - Race/ethnicity - Language preference - CCO region and/or geography (e.g., urban, rural, frontier) - Disability status - Medical complexity - CCO vs. FFS	REALD and SOGI Data Repository	differences analysis Comparative statistics for group differences
Research question 3. What are the impacts of eligibility and coverage policies on provider uncompensated care costs?	Proportion of hospital discharges for which primary payer was uninsured individuals Hospital system Medicaid shortfalls (i.e. the gap between Medicaid payment rates and systems' costs for serving	Potential comparisons: - OHP members enrolled before the demonstration - Medicaid members from	Healthcare Cost and Utilization Project, State Inpatient Databases Healthcare Cost Report Information System	Descriptive analysis Comparative statistics: - Pre-post analysis - DiD

Research question	Outcome measures	Sample or population groups to be compared	Data sources	Analytic methods
	Medicaid members) per member per year Hospital system Medicaid shortfalls in total Change in rate of increase of hospital system Medicaid shortfalls	other states not operating a similar demonstration	Oregon Hospital Reporting Program	analysis

Methodology

Evaluation design

The evaluation of sustainability and costs will use a mixed-methods study design, relying on both quantitative and qualitative data collection and analysis to assess cost and sustainability research questions. Cost and sustainability research question 1 will combine document review with key informant interviews with OHA and other agency staff to quantify expenditures accrued in implementing and operating the demonstration, as well as expenditures incurred by other state agencies partnering with Medicaid.

Cost and sustainability research question 2 will test impacts of the demonstration on overall health service expenditures (both medical and HRSN services) by comparing measures of costs of care (including total costs of care and per member per year costs of care) either before and after implementation or by examining changes and expenditures over time in Oregon compared to another state using a DiD analysis. This research question will also use claims data, the APAC Payment Arrangement File, and CCO financial reporting (Exhibit L) to assess the costs specifically of providing HRSN services, separate from providing medical services, under the demonstration. Finally, this approach will examine costs separately for key populations impacted by the demonstration policies including HRSN-eligible populations and YSCHN, as well as breaking out results by OHP member demographics, health conditions, and CCO enrollment vs. FFS.

Cost and sustainability research question 3 will use information from the Healthcare Cost and Utilization Project, State Inpatient Databases (HCUP-SID) and/or the Healthcare Cost Report Information System (HCRIS), as well as Oregon Hospital Financial Reporting Program data to assess whether the demonstration has impacted provider uncompensated care costs. Similar to cost and sustainability research question 2, the impact of the demonstration on provider uncompensated care costs will be tested either before and after implementation or by examining changes and expenditures over time in Oregon compared to another state using DiD analysis.

The research questions and hypotheses will use a range of analytic methods. Data obtained through key informant interviews will be used to identify and categorize demonstration-related costs appropriately. Content or thematic analysis may be used to characterize key informant opinions on demonstration sustainability. Quantitative outcomes will be analyzed using descriptive statistics, pre-post comparisons, DiD analysis, and comparative statistics for group differences. More detail on the analytic techniques can be found in the analysis section below.

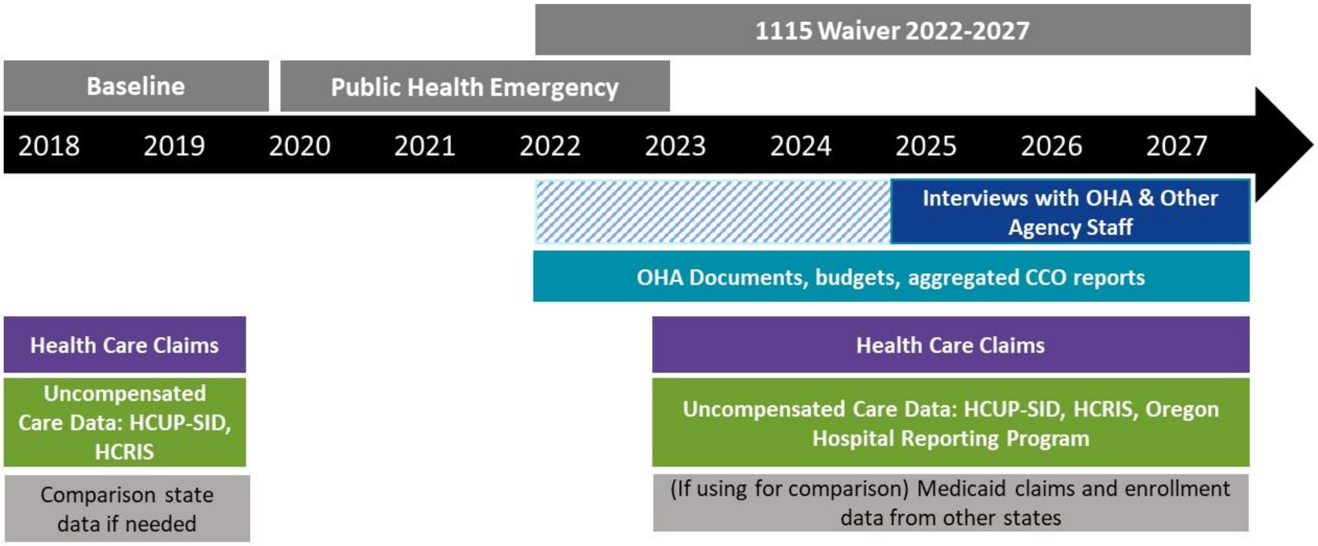
Evaluation period

The 2022 – 2027 1115(a) Medicaid Demonstration Waiver went into effect October 1, 2022, and runs through September 30, 2027. Implementation of individual waiver components will be staggered throughout the waiver period. The earliest component, the continuous enrollment policy, went into effect on July 1, 2023, and was applied retroactively back to April 1, 2023.

Cost and sustainability evaluation period (Figure 5.2). The evaluation period for sustainability and costs of the waiver demonstration will begin in 2022, with the implementation of the waiver, and end in 2027 when the demonstration period concludes. An additional 18 months beyond the waiver period will be used for analysis and dissemination. Figure 5.2 depicts the timing of data collection for the cost and sustainability research questions during the evaluation period. The figure shows the timing of actual data collection in solid colors and the period that the data will cover in striped colors.

- **Interviews with OHA and other agency staff.** Key informant interviews with OHA and other agency staff will be conducted in 2025 through 2027, with staff asked to reflect back on all work and expenditures, including DSHP-financed expenditures, starting in 2022.
- **Documents**. Document review will occur in 2025 to understand initial implementation and operation costs, and again in 2027 to collect final operation costs and assess if there have been substantial changes to cost categories. The documents themselves will cover the entire waiver period, from 2022 through 2027.
- **Administrative data.** Information on health services expenditures (from Medicaid claims data and the APAC Payment Arrangement File) and hospital system uncompensated care (from HCUP-SID, HCRIS, and the Oregon Hospital Reporting Program) will be collected from the implementation of the first policy component (Continuous Eligibility) in 2023 through the end of the demonstration period in 2027.
    - For evaluation questions that rely on pre-period data for comparison, the pre-period will cover the period before the implementation of the demonstration policies.

Figure 5.2. Evaluation period for cost and sustainability



Focus and comparison populations

A variety of different populations will be engaged to understand the costs and sustainability of the demonstration. The population size and focus will vary based on the research question. Below we provide a breakdown of these populations by research question.

Cost and sustainability research question 1. What are the administrative costs to implement and operate the demonstration? The study population for this research question includes staff from OHA, other state agencies, and CCOs who are responsible for implementing and operating the demonstration and tracking costs. Of note, information for this research question will also come from review of OHA Medicaid program budgets, and state documents including reporting on administrative costs, contracts with CCOs, and CCBF grant program documentation, which will capture DSHP-financed HRSN infrastructure funding passed from CCOs to Community Based Organizations (CBOs). These documents do not have a specific focus population beyond OHP members.

- **OHA and other state agency staff.** The independent evaluator will collaborate with OHA to identify staff most appropriate for interviews to understand the costs of the demonstration. Staff will consist of individuals who can identify and provide cost information and offer guidance on how staff time should be allocated in the analysis. The independent evaluator may also choose to interview OHA and other state agency staff who can offer insight on how the state is thinking about sustainability of the demonstration, including sustainability of HRSN infrastructure beyond DSHP financing. The independent evaluator will ensure that interviewees include staff at multiple levels within OHA and other state agencies to provide more complete information on administrative costs. We recommend approximately 20 interviews each year (2025-2027) for a total of 60 interviews.
- **CCO staff.** The independent evaluator will collaborate with OHA staff, including the Innovator Agent assigned to each CCO, to identify CCO staff most appropriate for interviews focused on administrative costs accrued to CCOs as part of the demonstration. We recommend approximately 20 interviews each year (2025-2027) for a total of 60 interviews.

Cost and sustainability research question 2. What are the short- and long-term effects of eligibility and coverage policies on health service expenditures, including HRSN service expenditures? The study population for this research question includes all OHP members because all members will be affected by one or more of the demonstration policies. Almost all OHP members will be impacted by the changes to CE; some OHP members will also experience the YSHCN, HRSN, or TME policies. Of note, information for this research question will also come from state reporting on capitation payments and CCO financial reporting (Exhibit L), which do not have a specific focus population beyond OHP members.

- **All OHP members.** Every OHP member covered during the demonstration period will be included. Groups within this population will include HRSN and YSHCN OHP members. Additionally, analysis will be stratified by the following factors, disaggregated to the greatest degree possible; age; sexual orientation and gender identity; race/ethnicity; language preference; CCO region and/or geography (e.g., urban, rural, frontier); disability status; medical complexity, and CCO enrollment vs. FFS.
- **Comparison groups.** We propose two potential comparisons for research question 2. The use of a comparison group allows the analysis to control for secular trends in health service expenditures and provides stronger evidence when determining the impacts of the waiver on expenditures for health services. The independent evaluator will decide the best course of action for selecting a comparison group based on the limitations and data accessibility of each group.
    - *Comparison group option 1.* Individuals enrolled in Medicaid in other states. Policy differences between states may impact the comparability of Medicaid enrollees across states.

    - *Comparison group option 2.* Individuals enrolled in Medicaid in Oregon, before the implementation of the demonstration. Any pre-period presents challenges for this evaluation; the independent evaluator will select the most appropriate period, given the following limitations. Including any of 2023 in the pre-period may have too much overlap with the beginning of the CE policy component, which was retroactive to April of that year, and there would be additional concerns about higher-than-average health services expenditures during that year as individuals caught up with previously deferred care. The 2020 through 2022 period had drastic changes in health care access and use caused by the COVID-19 pandemic, as well as the policy changes to Medicaid coverage that were implemented as a response to the pandemic. A pre-period of 2019 or earlier would avoid limitations related to the COVID-19 pandemic and recovery; however, having this large of a gap between the intervention period and the pre-period introduces other opportunities for bias due to secular trends in health care costs, including changes to public policies that may have impacted cost.

Cost and sustainability research question 3. What are the impacts of eligibility and coverage policies on provider uncompensated care costs? They study population for this research question includes all Oregon hospitals providing care to OHP members and uninsured individuals. The analysis will include the following focus populations and potential comparison groups.

- **Oregon hospital systems.** Medicaid shortfalls (i.e., the gap between Medicaid payment rates and systems' costs for serving Medicaid members) will be identified through the

HCRIS. Uncompensated care provided by hospital systems for uninsured individuals will be identified through the HCUP-SID.

- **Comparison groups.** We propose two potential comparisons for this research question:
    - *Comparison group option 1.* Uncompensated care provided by hospital systems in other states. Policy differences between states may impact the comparability across states.
    - *Comparison group option 2.* Uncompensated care provided by hospital systems in Oregon before the implementation of the demonstration policies. The pre-period comparison groups would face the same limitations as described in cost and sustainability research question 2 above.

Measures

The tables below list the descriptions and data sources for proposed measures to be included in the evaluation. The independent evaluator will provide measure specifications in the interim and summative reports for each quantitative measure used: this will include numerator and denominator definitions.

Cost and sustainability research question 1. What are the administrative costs to implement and operate the demonstration? Measures of administrative costs will come from OHA policy, budget, and administrative documents used to track demonstration implementation spending and interviews with staff from OHA, other state agencies, and CCOs.

Data source	Measure
Document review	***Administrative cost categories*** ▶ Staff positions, including FTE and any personal equipment costs (e.g. computers, cell phones, etc.) ▶ Contracting, including consultants hired in lieu of staff ▶ IT projects ▶ Other, including legal feels, communications, and publications ***Other cost categories*** ▶ DSHP-financed community capacity building funds (CCBF) grant program, meant to support partner organizations in developing the needed infrastructure to provide HRSN services
Interviews with OHA and other state agency staff	***Interview domains*** ▶ Identification of demonstration costs ▶ Allocation of staff time to implementing and operating the demonstration policies ▶ Views on sustainability, including sustainability of HRSN infrastructure beyond DSHP financing

Interviews with CCO staff	***Interview domains*** ▶ Identification of administrative costs accrued to CCOs due to the demonstration policies ▶ Allocation of staff time to implementing and operating the demonstration policies

Cost and sustainability research question 2. What are the short- and long-term effects of eligibility and coverage policies on health service expenditures, including HRSN service expenditures? Expenditure data from Oregon Medicaid Management Information System (MMIS) and the APAC Payment Arrangement File as well as information obtained through document review will be used to construct the needed measures for Research Question 2. If a comparison group from another state is utilized, then Medicaid claims data from other states will need to be collected either directly from another state or through the CMS T-MSIS Analytic File (TAF; see data sources for more information).

In addition, because this research question will also explore inequities in outcomes, the independent evaluator will collect or obtain information on a variety of demographic, geographic, and health-related characteristics for OHP members.

Data source	Measure
Medicaid claims data and APAC Payment Arrangement File (and REALD SOGI data repository)	***Health services cost categories*** ▶ Total cost of care ▶ Per member per month (PMPM) health care expenditures ▶ Total expenditures for specific types of utilization (e.g. primary care, inpatient stays, BH care, etc.) ▶ Total expenditures for HRSN services ▶ PMPM expenditures for HRSN services ▶ Total expenditures of each type of HRSN service (i.e. climate, housing, nutrition, and coordination and outreach)
Document review	***Other cost categories*** ▶ Capitation rate paid to CCOs ▶ HRS and HRSN service expenditures

Cost and sustainability research question 3. What are the impacts of eligibility and coverage policies on provider uncompensated care costs? Information on hospital system uncompensated care will come from the HCUP-SID and/or the HCRIS. These databases will provide information for both Oregon and the selected comparison state(s). Oregon-specific information will also come from the Oregon Hospital Reporting Program.

Data source	Measure
HCUP-SID	▶ Proportion of hospital discharges for which primary payer was uninsured individuals

Oregon Hospital Reporting Program	▶ Bad debt ▶ Charity care
HCRIS	▶ Medicaid shortfalls per member per year ▶ Medicaid shortfalls in total ▶ Change in rate of increase of Medicaid shortfalls

Data sources

This section describes the primary and secondary data sources needed for the cost and sustainability evaluation.

Primary data collection

Interviews. Interviews will be conducted with OHA, other state agency, and CCO staff to understand resource allocation decisions in the context of implementing and operating the demonstration. The independent evaluator will determine the key elements of each of these qualitative data collections efforts, including selecting the number of and sampling frame for interviewees, designing the interview guide, and setting the location and timing of each interview.

Secondary data

Most data for this evaluation will come from existing data sources. The following section provides details on each data source, categorized by the type of information the data source provides. For complete descriptions of each specific secondary data source, please see Attachment 4 (Secondary data source descriptions).

Document review of administrative and operation costs. The independent evaluator will review documents related to the implementation of the waiver including CCO contracts and amendments, documentation related to the DSHP-financed community capacity building fund grant program to support HRSN infrastructure, and other administrative expense reporting, including CCO financial reporting (Exhibit L), which tracks information on health-related services and HRSN services expenditures.

Health services expenditure and utilization data. Information on Oregon Medicaid health care utilization and services expenditures will come primarily from MMIS and APAC. Information for comparison states may come from the CMS T-MSIS Analytic File.

- *Oregon All Payers All Claims Database.* The APAC database is a comprehensive database that collects and stores administrative health care data from various sources, including commercial health plans, licensed third-party administrators, pharmacy benefit managers, Medicaid, and Medicare. The database contains information on insurance coverage, health service cost, and utilization for Oregon's insured populations. Medicare Fee-for-Service claims are in APAC but are not available for independent, external data requestors, so APAC data will reflect Medicare Advantage enrollees only. In addition to claim level expenditures, the APAC Payment Arrangement File includes payments made at the contract level that reflect alternative payment methods. Including contract level expenditures in addition to claim level expenditures provides the most comprehensive assessment of total health service expenditures.

- *Oregon Medicaid Management Information System (MMIS).* MMIS is a comprehensive database that contains detailed, timely, year-over-year data about Medicaid enrollees and the health care services paid by Medicaid. Claims for HRSN services will be included; thus, this data will serve as a critical source of information on receipt of HRSN services.
- *CCO financial reporting (Exhibit L).* OHA requires CCOs to report annual spending related to health-related services provided through flexible services and HRSN services. Expenditures are reported at both the individual member level for direct member level services and at the organization level for community benefit initiatives.

Uncompensated care costs. There are three sources of information on uncompensated care costs: the Oregon Hospital Reporting Program, CMS HCRIS, and AHRQ HCUP-SID.

- *Oregon Hospital Reporting Program.* The Oregon Hospital Reporting Program (HRP), part of OHA, maintains hospital system financial and utilization information. The HRP data assets that will support this evaluation include DATABANK, a data base containing monthly, self-reported, hospital system financial and utilization data, and annual community benefit reports filed by each system. The community benefit reports include costs associated with financial assistance, unreimbursed Medicaid (shortfalls), subsidized health services, and direct spending activities such as community health improvement activities, community building activities and cash and in-kind donations. Data in the Oregon Hospital Reporting System is more detailed than data in HCRIS or HCUP-SID and will support a more detailed within-state descriptive analysis than either national dataset.
- *Healthcare Cost Report Information System (HCRIS).* HCRIS is maintained by CMS and contains provider information such as facility characteristics, utilization data, and cost and charges by cost center for various health care facilities, including hospitals, skilled nursing facilities, home health agencies, and others. HCRIS includes measures of hospital Medicaid revenues and uncompensated care costs and will provide data on hospital and system Medicaid shortfalls.
- *Healthcare Cost and Utilization Project, State Inpatient Databases (HCUP-SID).* The State Inpatient Databases (SID), which are part of the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality (AHRQ), will supply data about uncompensated care costs accrued due to the provision of care to uninsured individuals. See attachment 4 for more detail about this data source.

Analytic methods

This section describes the qualitative and quantitative analytic methods for the cost and sustainability evaluation.

Qualitative analysis

The independent evaluator will be responsible for solidifying the qualitative analysis approach used in this evaluation. However, we anticipate the following steps: creation of a structured or semi-structured interview guide for interviews; creation of a coding framework for interview transcripts and document review; and content or thematic analysis to identify cost categories and views on sustainability.

Quantitative analysis

The following quantitative analysis techniques will be used to answer the various research questions.

Descriptive statistics. All implementation and evaluation questions that require quantitative analysis will begin with descriptive statistics, for example: means, medians, or percentages; or measures of distribution and spread, such as the interquartile range. **Cost and sustainability research question 1** will only use descriptive statistics.

Analysis using comparison groups. Quantitative analytic techniques that use comparison groups provide stronger evidence when determining the impacts of the demonstration by helping to control for secular trends that would otherwise obscure results. Possible techniques include:

- *Pre-post comparisons.* The first of the two potential comparison populations, OHP members enrolled before the implementation of the demonstration policies, requires the use of a pre-post comparison. This can be done through tests of means or proportions comparing summary statistics from the pre-period to summary statistics from the period post-implementation. It can also be done using the pooled cross-section analysis approach, with each year of the post-implementation period being compared to the pre-period.
- *DiD analysis.* The second potential comparison population leverages both Oregon pre-period data and data from other states for a DiD design. This analysis design provides three estimates. For example, when assessing the impact of the demonstration waiver on health services expenditures, the DiD design produces: (1) the expected background change in health services expenditure over time absent Oregon's demonstration policies, as represented by the change in health services expenditures over time for the control state; (2) the baseline (e.g. before the implementation of the demonstration waiver) difference in health services expenditures between Oregon and the control states; and (3) the change over time in health expenditures between Oregon and the control states. It is this last estimate that allows for assessing the impact of Oregon's demonstration waiver policies on health services expenditures. The main assumption unique to the DiD model is that of parallel trends in the outcome at baseline. Because there is no statistical test for this assumption, it is often assessed by plotting the health service expenditure patterns for the intervention and control states during the pre-period and visually compare the trends between the two groups.

Research questions that may use analytic techniques involving comparison groups are:

- **Cost and sustainability research question 2.** What are the short- and long-term effects of eligibility and coverage policies on health service expenditures, including HRSN service expenditures?
- **Cost and sustainability research question 3.** What are the impacts of eligibility and coverage policies on provider uncompensated care costs?

Comparative statistics for group differences. For evaluation questions assessing the impact of the demonstration waiver on costs for specific policy groups (including individuals receiving HRSN services, OHP members enrolled under the YSHCN policy, or those enrolled in CCOs vs FFS) or on inequities among groups currently and/or historically excluded from coverage and health care, differences between groups can be assessed by tests of means or proportions or the inclusion of interaction terms in regression models.

Methodological limitations

Methodological limitations inherent in this evaluation design include: concerns about the influence of other state policies and programs centered around cost containment, rate increases, and expanded coverage the validity of the statistical comparisons; and assumptions related to interpretation of results.

Influence of other state policies and programs

Oregon has previously implemented a variety of cost containment measures that may make it challenging to isolate the effects of the demonstration on health services expenditures and provider uncompensated care costs. For example, Oregon's Medicaid program has been subject to a health care cost growth target since 2012. In addition, the Sustainable Health Care Cost Growth Target Program, established through the Oregon legislature in 2019, extends the target annual per capita rate of health care spending growth to the entire state. Insurance companies and certain health care provider organizations are then held responsible if their cost growth exceeds the target. Given the high proportion of providers in Oregon that serve OHP members, any changes provider organizations make to accommodate this new target may have spillover effects into the Medicaid population.

At the direction of the state Legislature, Oregon has also implemented policies that may increase health services expenditures, notably a roughly 30% fee increase in behavioral health provider rates under both fee-for-service and managed care. The legislative investment is anticipated to result in approximately $154.5 million total funds for Oregon's Medicaid system. OHA has also recently implemented a primary care services rate increase as required by the Terms & Conditions of the current 1115 waiver.

The Healthier Oregon Program, which primarily uses state funds to provide Medicaid-like coverage for individuals who would otherwise be eligible for Medicaid except for their immigration status, may influence analysis of the demonstration's effect on uncompensated care costs. Healthier Oregon started as Cover All Kids and was initially expanded to for individuals aged 19-26 or 55 and older in 2022, then expanded to adults of all ages in July 2023, during the current demonstration period. As individuals gain Medicaid-like coverage through Healthier Oregon, it is likely that uncompensated hospital care costs will decline.

Finally, other changes to OHP benefits or reimbursement that are unrelated to the demonstration may affect health services expenditures and provider uncompensated care costs. Such changes occur regularly; recent examples include increased CCO payment requirements for hospitals paid on a Diagnostic Related Group basis and Indian Health Care Providers, coverage for mobile crisis intervention services, and incorporation of COVID-19 vaccine costs into CCO capitation rates (as of October 2024).

Analytic concerns

Validity of statistical comparisons. One potential analytic method to isolate the impacts of the current demonstration is to compare current cost outcomes to a population not subject to these confounding cost containment measures or other policies. One way to do that would be to use a within Oregon comparison period prior to the existence of these cost containment measures, but this poses its own challenges. For example, as stated above, cost containment measures for Medicaid have been in effect since 2012, but creating a comparison population pre-2012 would also mean creating one before the organization of Oregon Medicaid into CCOs or the expansion of Medicaid under the Affordable Care Act. Both policy changes would have substantial confounding effects on the analysis.

Another approach would be to compare to other states without cost containment measures, which avoids some of the limitations of a pre-post comparison but introduces its own unique threats to internal validity. For example, other states may vary substantially from Oregon in several critical ways, such as differences to the policy and cultural environment, which are not as easily measured and therefore cannot be included in the model. Combining pre-period data and information from other states into a DiD analysis is therefore the best approach to mitigating these limitations.

Data limitations. There are known equity limitations to many of the proposed data sources. In particular, health care enrollment and utilization data can have moderate to high levels of missing data for demographic information, which can limit an evaluator’s ability to examine expenditure differences by race/ethnicity and other factors. Oregon has committed to addressing this issue by improving collection of race, ethnicity, language, and disability (REALD) information. These efforts are expected to reduce the rate of unknown or missing race and ethnicity substantially but data for pre-demonstration comparison periods, if used, may not be as complete.

Interpretation of results. It is finally worth noting that some assumptions underlying the research questions and hypotheses may be subject to change as the demonstration progresses. For example, the state hypothesizes that the demonstration will reduce uncompensated care for providers. However, the two main forms of uncompensated care under exploration – Medicaid shortfalls and charity care or bad debts for uninsured individuals – may work in opposite directions. As more previously uninsured individuals are enrolled in, and then retained on, OHP, there will likely be less charity care; but in contrast there may be larger Medicaid shortfalls. The overall impact the demonstration has on uncompensated care for providers would therefore depend on the proportion of uninsured individuals versus OHP members and this may change over time.

Likewise, it is challenging to predict exactly how the demonstration policies will impact health care expenditures. The CE and YSHCN policies are intended to increase the overall number of individuals enrolled in Medicaid during the demonstration period, yet the CE policy is likely to decrease the average medical acuity of OHP members while the YSHCN policy would likely increase it. HRSN may or may not impact the medical acuity of eligible OHP members but would likely continue to increase costs as more services are provided. As the proportion of OHP members who fall into these different categories changes over time, so too would the expected overall impact on costs of care.

Chapter 6. Conclusion

The evaluation designs proposed in this document represent Oregon's commitment to a thorough and robust evaluation of the waiver demonstration, including how the demonstration contributes to OHA's strategic goal of eliminating health inequities in Oregon by 2030. Targeted examinations of each of the waiver's key policies will provide crucial information on the implementation and impact of coverage for health-related social needs, continuous eligibility and temporary Medicaid expansion, and new provisions for young adults with special health care needs. The evaluation will also assess the demonstration's impact on health care and other expenditures and the implications for sustainability. Collectively, these efforts will help Oregon test its progress toward improving the health and well-being of communities and populations served through the demonstration.

Chapter 7. References

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Attachments

Attachment 1. Independent evaluator

This draft evaluation design was prepared by the Center for Outcomes Research and Education (CORE). CORE is an independent team of scientists, researchers, and data experts housed within the Providence Health System in Oregon, with a mission to drive meaningful improvements in health and health equity through collaborative research, evaluation, analytics, and strategic consulting. The Oregon Health Authority (OHA) contracted with CORE to develop the evaluation design for the 2022-2027 1115 Medicaid Waiver. Once the evaluation design has been approved by CMS, an independent evaluator (or multiple independent evaluators) will conduct the evaluation(s).

Pursuant to the Special Terms and Conditions, Oregon will select an independent evaluator to conduct the work detailed in the approved Final Evaluation Design. The independent evaluator will demonstrate a commitment to Oregon's strategic goal to eliminate health inequities, have experience with and knowledge of Oregon Medicaid policy and the general Oregon landscape, have experience working with large administrative data sets and systems, and have expertise with community engagement and the qualitative and quantitative methods required to carry out the evaluation design. Further, the independent evaluator must be free of any conflict of interest, conduct a fair and impartial evaluation, and prepare an objective evaluation report.

OHA will assure that the independent evaluator is free of any conflict of interest and will conduct a fair and impartial evaluation in the following ways:

- Contract terms: As part of its usual contracting process, OHA requires independent entities to attest by signature that the work to be performed under the contract creates no potential or actual conflict of interest as defined by Oregon Revised Statute (ORS) Chapter 244.
- No Conflict of Interest statement: OHA will require the independent evaluator to declare they are free from any financial or other conflicts of interest in a signed statement. The independent evaluator will be required to list any connections with entities that would have a potential interest in shaping the evaluation and its findings and attest that, should these connections exist, there will be no resulting conflict of interest.

OHA will submit the No Conflict of Interest statement signed by the independent evaluator in an amendment to this document.

Attachment 2. Evaluation budget

The table below provides a breakdown of the proposed evaluation budget by year. Costs include personnel (including fringe benefits and indirects), survey, interview/focus groups, and other.

	2024	**2025**	**2026**	**2027**	**2028**	**2029**	
Personnel (including fringe benefits and indirects)	$295,696	$1,097,389	$1,545,078	$1,260,825	$1,540,587	$321,618	
Survey non-personnel costs (e.g. translation, printing, mailing, incentives)	$0	$3,000	$100,500	$100,500	$0	$0	
Interview or focus group costs (e.g. interpretation, incentives)	$0	$13,825	$26,395	$18,494	$0	$0	
Other (e.g. IRB, in-state travel, software, etc.)	$0	$16,582	$14,138	$4,153	$3,600	$3,600	**Total (All Years)**
Total	**$295,696**	**$1,130,796**	**$1,686,111**	**$1,383,972**	**$1,544,187**	**$325,218**	**$6,365,980**

More information about these costs are as follows:

Personnel. This includes all staff time to complete the evaluation plan. Staff roles would include research scientists, program managers, project managers, research analysts, research associates, and data engineers. Their work would cover all oversight and planning, design, data collection, analysis, reporting, coordination, and all other tasks related to the successful completion of the evaluation plan. The personnel budget line includes fringe benefits and indirects.

Survey. This includes all survey non-personnel costs including translation, printing, and mailing. Compensation for survey respondents is also included in this budget line.

Interview or focus groups. Cost associated with interviews and/or focus groups include translation of materials, verbal translation services, and transcription fees. Budget to compensate OHP Members (and/or their family members or caregiver) who participate in interviews or focus groups is also included.

Other. Other costs include IRB fees, software (for example, software needed to host the HRSN discussion boards), travel (such as travel needed to get to in-person interviews), etc.

Attachment 3. Timeline and major milestones

		2024	**2025**			
		Q4	Q1	Q2	Q3	Q4
Milestones & IRB		Contract signed; prepare work plan for OHA	Protocol & materials prepared & submitted	IRB approval	IRB modifications (as needed)	
Primary Data Collection	CE		Develop interview guides	OHA approval of guides, interview & focus group (FG) prep	Interviews/FGs with OHA, ODHS, AAA, Call center & CCO staff	
	TME		Develop interview & FG guides	OHA approval of guides, interview & FG prep	Interviews/FGs with: OHA, ODHS, AAA, CCO, Call center staff; OHP members subject to TME	
	HRSN		- Develop interview guides (Key entity & HRSN beneficiary) & survey - Discussion board questions	- OHA approval of interview guides & discussion board questions, interview prep -Develop survey	- Interviews with: Key entities (round 1), HRSN beneficiaries - Discussion boards - CMS approval of survey	- Interviews with HRSN beneficiaries - Discussion boards - Develops interview guide for health care providers - Survey translation & fielding prep
	YSHCN		Develop interview guides (OHA staff & outreach staff, community partners, and assisters)	OHA approval of guides, interview prep	- Interviews with: OHA staff; outreach staff, community partners, and assisters; CCO staff & OHA staff overseeing FFS - Develop interview guides for YSHCN OHP members & families/caregivers	- Interviews with: OHA staff; outreach staff, community partners, and assisters; CCO staff & OHA staff overseeing FFS - OHA approval of YSHCN OHP member interview guide; interview prep
	Cost		Contractor development of interview guides	OHA approval of interview guides, interview prep	OHA & other agency staff interviews	
Secondary Data Collection	CE		Data sharing agreements			
	TME		Data sharing agreements			
	HRSN		Data sharing agreements; logistics of acquisition of publicly available data			
	YSHCN		Data sharing agreements			
	Cost		Data sharing agreements			

Data Analysis	CE					Interview & FG analysis
	TME					Interview & FG analysis
	HRSN					- Interview analysis - Discussion board analysis - Document review - Environmental scan (round 1)
	YSHCN					Interview analysis
	Cost					Interview analysis

		2026			
		Q1	Q2	Q3	Q4
Milestones & IRB		IRB modifications (as needed)		Interim CMS report due Sept.	IRB modifications (as needed)
Primary Data Collection	CE	Interviews/FGs with OHA, ODHS, AAA, Call center & CCO staff		OHP member interviews/FG	
	TME				
	HRSN	- Interviews with: Key entities (round 2), HRSN beneficiaries, health care providers (round 1) - Discussion boards - Survey fielding	- Interviews with HRSN beneficiaries - Discussion boards - Survey fielding	- Interviews with: Key entities (round 3), HRSN beneficiaries - Discussion boards - Survey fielding	- Interviews with HRSN beneficiaries - Discussion boards - Survey fielding
	YSHCN	- Interviews with: OHA staff; outreach staff, community partners, & assisters; CCO staff & OHA staff overseeing FFS; YSHCN OHP members & family/caregivers - Develop health care provider interview guide	- Interviews with: OHA staff; outreach staff, community partners, & assisters; CCO staff & OHA staff overseeing FFS; YSHCN OHP members & family/caregiver - OHA approval of health care provider interview guide	- Interviews with: CCO staff & OHA staff overseeing FFS; YSHCN OHP members & family/caregiver; health care provider interviews	
	Cost	OHA & other agency staff interviews			

Secondary Data Collection	CE	Preliminary data acquisition: Call center			
	TME	Data acquisition: ONE eligibility system, claims			
	HRSN	- Documents acquisition - Environmental scan data acquisition			- Acquisition: documents - Environmental scan data - Preliminary data acquisition for analysis prep: claims, HMIS, ONE/ICS, CCO financial & contract reporting)
	YSHCN				Preliminary data acquisition for analysis prep: all sources
	Cost	Documents acquisition			- Document acquisition - Preliminary data acquisition for analysis prep: claims, CCO financial reporting, uncompensated care
Data Analysis	CE	Interview & FG analysis			
	TME	- Interview & FG analysis - Analysis (ONE eligibility system & claims)		Analysis (ONE eligibility system & claims)	
	HRSN	- Interview analysis - Discussion board analysis - Document review - Environmental scan (round 1)			
	YSHCN	Interview analysis			
	Cost	- Interview analysis - Document coding			

		2027			
		Q1	Q2	Q3	Q4
Milestones & IRB		IRB modifications (as needed)			
Primary Data Collection	CE	OHP member interviews/FG			
	TME				
	HRSN	- Interviews with: Key entities (round 4), HRSN beneficiaries - Survey fielding	- Interviews with: HRSN beneficiaries, health care providers (round 2) - Survey fielding	- Interviews with HRSN beneficiaries - Survey fielding	
	YSHCN	YSHCN OHP member & family/caregiver interviews			
	Cost	OHA & other agency staff interviews			
Secondary Data Collection	CE				
	TME				
	HRSN	- Document acquisition - Environmental Scan data acquisition			
	YSHCN				
	Cost	Documents acquisition			
Data Analysis	CE	- Interview/FG analysis			
	TME				
	HRSN	- Interview analysis - Discussion board analysis - Document review - Preliminary analysis/data prep (claims, HMIS, CCO financial & contract reporting, environment data, other secondary data) - Preliminary survey analysis/prep			
	YSHCN	- Interview analysis - Preliminary analysis/data prep (ONE eligibility system & claims)			
	Cost	- Interview analysis - Document coding - Preliminary analysis/data prep (claims, CCO financial reporting, uncompensated care)			

		2028				2029
		Q1	Q2	Q3	Q4	Q1
Milestones & IRB		IRB modifications (as needed)				Summative CMS report due March
Primary Data Collection	CE					
	TME					
	HRSN					
	YSHCN					
	Cost					
Secondary Data Collection	CE	Data acquisition: Call center, claims, ONE eligibility system/ICS, CAPHS				
	TME					
	HRSN	Data acquisition: claims, HMIS, ONE eligibility system/ICS, CCO financial & contract reporting				
	YSHCN	Data acquisition: claims & ONE eligibility system				
	Cost	Data acquisition for analysis prep: claims, CCO financial reporting, uncompensated care				
Data Analysis	CE	Analysis: Call center data, claims, CAHPS, and ONE eligibility system and/or ICS data				
	TME					
	HRSN	- Interview analysis - Document review - Environmental scan (round 2) - Analysis: claims, HMIS, CCO financial & contract reporting, environment data, other secondary data - Survey analysis				
	YSHCN	Analysis: ONE eligibility system & claims				
	Cost	- Interview analysis - Analysis: claims, CCO financial reporting, uncompensated care		Analysis: claims, CCO financial reporting, uncompensated care		

Attachment 4. Secondary data source descriptions

This attachment provides descriptions of the secondary data sources that have been mentioned in the evaluation design. It provides more detailed information than is included in the evaluation design narrative, covering data providers, contents and data elements, common applications, relevant equity considerations, logistical considerations, and potential limitations for use in evaluation.

All Payers All Claims database

The Oregon All Payer All Claims (APAC) database is a comprehensive database that collects and stores administrative health care data from various sources, including commercial health plans, licensed third-party administrators, pharmacy benefit managers, Medicaid, and Medicare. Established in 2009 by the Oregon State Legislature to measure health care costs, quality, and utilization for Oregon's insured populations, the database contains information on insurance coverage, health service cost, and utilization for Oregon's insured populations. It includes medical and pharmacy claims, non-claims payment summaries, member enrollment data, billed premium information, and provider information. The APAC data is widely used by the Oregon Health Authority (OHA) and other state agencies, as well as external users, to study population health issues and drive health system improvements. Although APAC data covers a large proportion of Oregon residents, it does not capture data for uninsured individuals or for individuals covered by federal programs such as Veterans Affairs, Indian Health Services, or health insurance plans for federal employees. Recent developments to the APAC data include the addition of a unique person identifier that supports reporting on individual's health care usage even as they move between health plans.

In addition to claim-level expenditures, the APAC Payment Arrangement File includes payments made at the contract level that reflect alternative payment methods. Including contract level expenditures in addition to claim level expenditures provides the most comprehensive assessment of total health service expenditures.

The data quality in APAC can be influenced by the reporting practices of commercial payers who are not mandated to report certain data for commercial transactions, leading to a high proportion of unknown or null values for some fields such as race, ethnicity, and primary language. Just over half of people in APAC have no reported race or ethnicity and an estimated 50% have no reported spoken language preference. Efforts by the state to integrate APAC data with other state data sources reduced the rate of unknown race and ethnicity significantly for people with Medicaid, but the availability of those integrated sources is currently limited. To support disaggregation, race and ethnicity data is available as both a single race or ethnicity field and as multiple fields to capture all races and ethnicities reported for the member over time. To account for claims lag and adjustments, payers submit claims data to APAC on a rolling basis with payers submitting 12 months of claims each quarter. APAC data is finalized and released 15 months after the final submission for a calendar year. For example, claims for 2023 will become available for request in January 2025.

CCO contract reporting (Exhibit I)

The Oregon Health Authority (OHA) requires Coordinated Care Organizations (CCOs) to maintain comprehensive records of all grievances and appeals. These logs should include information on the member who filed the grievance or appeal, the date of the appeal, details of the CCO's review, the resolution or disposition status, and reason for the decision. The log also contains a general description of the reason for the appeal and notes on communication with the member. Additionally, CCOs must provide quarterly reports summarizing grievances and a quarterly summary of all notices of adverse benefit determinations. The aggregated appeals data is publicly accessible on the OHA Reporting website and is also submitted to CMS as part of the quarterly 1115 Waiver Report.

CCO financial reporting (Exhibit L)

The Oregon Health Authority (OHA) requires Coordinated Care Organizations (CCOs) to report annual spending related to health-related services provided through flexible services and Health Related Social Needs (HRSN) Services. This reporting requirement is a part of the CCO contracts with the OHA. Health-related services, as defined by both state and federal regulations, refers to both flexible services offered to individuals to supplement covered benefits and to Community Benefit initiatives that focus on improving population health and health care quality. Beginning in 2024, OHA will begin requiring CCOs to report spending on HRSNs through the same mechanism. Expenditures are reported at both the individual member level for direct member level services and at the organization level for community benefit initiatives. Member identifiers within the health-related services and HRSN expenditure reports enable the data to be matched to Medicaid enrollment and claims data for reporting by demographics, chronic conditions, and health care utilization patterns. The purpose of this reporting is to monitor the performance of CCOs in delivering these health-related services and to ensure accountability and transparency in the health care system. While CCO financial reporting provides a valuable source of information on health-related services and expenditures, reporting is aggregated by service categories for an individual or organization.

Climate and environment data

Information on extreme temperatures, air quality, wildfires, and other environmental factors that are specific to the location where a particular beneficiary resides can be acquired from multiple state and national sources including;

- *EPA AirNow* provides air quality data, including information on pollutants such as ozone and particulate matter. This data can be used to assess air quality in specific locations and its potential impact on Medicaid members, particularly those with respiratory conditions.
- The *Oregon DEQ* air quality data offers detailed information specific to Oregon. It helps evaluate local air quality and its implications for Medicaid members in the state. This data can identify areas with poor air quality and extreme temperatures.

- The *Oregon GEOHub* provides geospatial datasets related to the state's environment, including climate and air quality data. These datasets are valuable for providing localized insights into environmental conditions.
- *Executive Orders* related to climate emergencies in Oregon provide policy and regulatory context for climate-related initiatives.
- The *CDC's Social Vulnerability Index (SVI)* incorporates social and economic factors to assess communities' vulnerability to environmental hazards. It helps identify areas where residents may be more vulnerable to climate-related challenges. The index uses U.S. Census data to determine the social vulnerability of every census tract based on factors such as poverty, lack of vehicle access, and crowded housing.

Consumer Assessment of Healthcare Providers and Systems Survey

The Consumer Assessment of Healthcare Providers and Systems (CAHPS) Survey is a standardized and publicly reported survey designed to measure patients' perspectives of health care services delivered in various settings. The program is developed and implemented by the Agency for Healthcare Research and Quality (AHRQ) and assesses patients' experiences with health care services in settings such as hospitals, home health care agencies, doctors, and health and drug plans. The survey focuses on what patients themselves consider important and features on which they can offer valid and reliable feedback. The CAHPS Survey provides useful information on patients' perspectives of health care services however, the survey relies on patients' self-reported experiences, which may be prone to recall bias and other limitations inherent in self-reported data.

Healthcare Cost and Utilization Project, State Inpatient Databases (Agency for Healthcare Research and Quality)

The State Inpatient Databases (SID) are part of the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality (AHRQ). The SID contain inpatient discharge records from community hospitals in a specific state, providing a unique view of inpatient care in that state over time. They include more than 100 clinical and nonclinical variables, such as patient demographics, diagnoses, procedures, charges, and expected payment. The SID are used by researchers and policymakers to investigate questions unique to one state, compare data from two or more states, conduct market area research, or identify state-specific trends in inpatient care. They are well suited for research that requires complete enumeration of hospitals and discharges within geographic areas or states. The SID are available for purchase through the HCUP Central Distributor, and their use is limited to research and aggregate statistical reporting. The SID are calendar year files for all data years except 2015, which was split into two parts due to the transition to ICD-10-CM/PCS.

Healthcare Cost Report Information System

The Healthcare Cost Report Information System (HCRIS) is maintained by CMS and contains provider information such as facility characteristics, utilization data, and cost and charges by cost center for various healthcare facilities, including hospitals, skilled nursing facilities, home health agencies, and others. The data in the HCRIS is based on elements from cost reports submitted to CMS by healthcare providers. This information is used to inform policymakers about the costs of providing healthcare on a national basis and allows researchers to compare different providers' costs and other metrics to identify areas where improvements can be made.

The data included in HCRIS data may change over time and delays in data availability may impact the ability to assess real-time effects of state-level Medicaid policy changes. HCRIS files become publicly available nine months after the end of the cost reporting year, but the data is more stable two to three years after the end of a hospital's fiscal year. There are also limitations with item nonresponse and data quality. While the system provides extensive cost-related data, it may not capture the full scope of Medicaid policy changes or their effects, as it primarily focuses on hospital financial measures, including Medicaid revenues and uncompensated care costs.

Homeless Management Information System

HMIS collects information about homeless people and the services they receive. It tracks data on housing, shelters, and services provided to those who are homeless or at risk of homelessness. In Oregon, there are three HMIS instances administered by the Oregon Department of Housing and Community services, NW Social Services Connections (Washington, Clackamas and Multnomah counties) and Lane County. By bringing together different organizations that help the homeless in a community, HMIS creates a more organized and effective system for providing housing and services. It also helps local communities understand how widespread homelessness is, the characteristics of the people being helped, and how effective the programs are at reducing and ending homelessness. Compared to other methods like counting the number of homeless people on a specific night or combining data from different programs, HMIS is a better way to gather information about homelessness in a community. Point-in-time counts only give a snapshot of homelessness and do not capture how long someone has been homeless. They also miss people who move in and out of homelessness over time. Combining data from different programs can lead to duplicated information and limited understanding of how many people are using services. On the other hand, HMIS gives an accurate count of the number of people being helped and collects data over time, so it provides a more accurate picture of homelessness and how it changes in a community. It also captures information about changes in where people live, family situations, and what services they use.

As a best practice, the CDC recommends integration of HMIS with medical records and other surveillance systems for the evaluation of public health interventions and health policies. However, there are several logistical challenges to the integration of these sources and limitations in the use of HMIS data for evaluation. The primary logistical challenge is the lack of a centralized HMIS at a national or state level necessitates execution of data use agreements with multiple partners. Additionally, deterministic and probabilistic matching is required to match individuals across data sources. The success of this match is dependent on the quality and completeness of data entered in the respective system. Limitations in HMIS data for evaluation include lower data completion rates for populations who are unsheltered or unstably housed, a bias towards inclusion of populations seeking or engaged in housing support services, and lags in the documentation service utilization or housing status changes.

Implementation Data for document review

- *OHA Ombuds report*: Reports on Medicaid concerns and compliments reported to the state Ombuds program will be reviewed for barriers and facilitators to beneficiary and provider participation.
- *Data collected by agencies providing HRSN capacity building support (e.g., Corporation for Supportive Housing)*: Where available, data collected by non-state agencies and resulting reports on community capacity building will be reviewed to provide information on barriers and facilitators to capacity building.
- *Waiver implementation reports*: Reports from the state, CCOs, subcontractors and delegates on implementation, administration, and outcomes of the waiver demonstration. The evaluator will analyze the following:
    - *Monitoring reports*: Reports documenting the ongoing monitoring activities related to the waiver, including any findings, observations, or recommendations (e.g., the HRSN Service Provider Network Monitoring Report, among others).
    - *Meeting notes*: Records of meetings held among stakeholders, which may contain important discussions, decisions, and action items related to the waiver's implementation.
    - *CCBF documentation*: Documentation related to the DSHP-financed Community Capacity Building Fund (CCBF) grant program, including guidelines, applications, disbursement procedures, any changes or updates made to the fund, and information about recipients and grant amounts of CCBF awards. The evaluator will review these reports to assess the progress and effectiveness of the DSHP program in developing and enhancing community infrastructure to provide HRSN services.
    - *CCO annual HIT roadmaps*: CCO Documentation of plans to support CIE adoption as well as challenges and lessons learned.
    - *Subcontractor and delegate reports*: Reports submitted by subcontractors and delegates involved in the implementation process, providing information on their activities, achievements, and challenges.
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Implementation/Contextual Data for environmental scan

- *CCO transformation quality reports*: The evaluator will review CCO reporting and OHA assessments on transformation activities as part of the environmental scan for relevant activities throughout the state.
- *Legislatively approved budgets:* State budgets will be reviewed to provide context for social services and policies outside the demonstration that may impact Medicaid beneficiaries.
- *Regional and county-level investment data for social services:* Where available, the evaluator will review annual budgets, reports, policy changes, and meeting notes from county and regional governments as well as the Oregon Association of Counties Health and Human Services Steering Committee to provide context on local efforts that may vary across the state.

Integrated Client Services database

The Integrated Client Services Database (ICS) maintains a Master Client Index spanning individuals served by the Oregon Department of Human Services (ODHS) and the Oregon Health Authority. Using the Master Client Index, the ICS facilitates the linking of individual level cross-agency datasets through creation of an individual level study identifier that is applied to all requested data sources. Developed in 2005, the ICS is maintained by the Office of Forecasting, Research, and Analysis within the ODHS. It is used by the ODHS to inform policy and programmatic decisions and by external researchers to study population health issues and drive health system improvements.

Privacy and security concerns, along with the need to protect sensitive information about individuals and families receiving services, may restrict data availability.

Medicaid Management Information System (MMIS)

MMIS is a comprehensive database that contains detailed, timely, year-over-year data about Medicaid enrollees and the health care services paid by Medicaid. MMIS also contains information on HRSN services expenditures (in addition to these expenditures being tracked and reported in the CCO Financial Reporting Exhibit L). The MMIS data are used for monitoring, reporting, and improving Oregon’s Medicaid delivery system. The data can provide insights into various aspects, such as telehealth use, Medicaid enrollment, prenatal visits, and vaccination rates. The MMIS data are collected from two main sources: eligibility data and claims/encounter data. To support disaggregation, race and ethnicity data is available as both a single race or ethnicity field and as multiple fields to capture all races and ethnicities reported for the member over time.

Efforts by the state to improve the collection of data on race, ethnicity, language, and disability (REALD) are expected to reduce the rate of unknown race and ethnicity significantly, but these collection efforts are recent and rates of missing data may be higher among those who have not recently applied for benefits through the Oregon ONE System. To account for a lag in claim submission and adjustments, evaluators should consider incorporating a 3 to 6 months claims lag when reporting on utilization and healthcare metrics using MMIS data.

ONE Customer Service Center Dashboard

The ONE Customer Service Center Dashboard is an interactive tool that offers information on the customer service experience for callers to the ONE Customer Service Center, a resource for individuals in Oregon to apply for or get help with medical, food, cash, and childcare benefits by phone. It provides daily updates on call volume, wait times, accepted calls, abandoned calls, and average customer service score (1 being the lowest and 4 being the highest).

The dashboard does not provide detailed information on callers' specific concerns or issues. At present, the ONE Customer Service Center does not collect demographics data from callers and data on call center queues cannot be linked to client information.

ONE Eligibility system

The ONE Eligibility system is a platform that simplifies the application process for Oregon residents seeking medical, food, cash, and childcare benefits. The system offers multiple application options, including online, phone, or in-person, via a single application. The ONE Eligibility System aims to reduce the time and effort required to apply for benefits by streamlining the application process. This system provides a convenient way for users to apply for benefits, check application status, renew benefits, upload documents, report changes, and update information. The ONE Eligibility system gathers various information about the applicant, including demographic information, household income, current benefits, household - composition, and disability and activities of daily living. The system also collects data on current and past insurance coverage and includes the implementation data collection on race, ethnicity, language, and disability (REALD) to improve the disaggregation of applicant data by demographics, language preference, and disability.

Oregon Hospital Reporting Program data

The Oregon Hospital Reporting Program (HRP), part of the Oregon Health Authority (OHA), maintains hospital financial and utilization information. HRP can provide the following information:

- *DATABANK* is a data base containing monthly, self-reported, hospital financial and utilization data. The database is updated on a quarterly basis and an excel version is made available on the program’s website.
- *Audited Hospital Financial Data, and Hospital Financial Data.* Hospitals are required to submit audited financial statements and summarize these statements on a hospital-specific FR-3 forms each fiscal year. Hospital FR-3 forms are made available on the program’s website.

- *Hospital Discharge Data (HDD):* Discharge data are abstracted patient record derived from hospital administrative data. It contains descriptive information, such as diagnosis codes, procedure codes and patient information for inpatient and emergency room visits in Oregon hospitals.
- *Hospital community benefit reports.* Oregon hospitals are required to submit a report each fiscal year detailing the net costs associated with their community benefit programs. This will include costs associated with financial assistance, unreimbursed Medicaid (shortfalls), subsidized health services, and direct spending activities such as community health improvement activities, community building activities and cash and in-kind donations.

Data in the Oregon Hospital Reporting System is more detailed than data in HCRIS or HCUP-SID and will support a more detailed within-state descriptive analysis than either national dataset.

Oregon Medical Redetermination dashboard

This is a publicly available dashboard that provides aggregated data on the redetermination process for Medicaid enrollees in Oregon. It includes information on individuals who continue to be eligible for Medicaid, those who are no longer eligible, and those who are transitioning to different coverage. For those who do not renew, the dashboard tracks the reason for their termination. To highlight inequities among priority populations, data can be broken down by geography, demographics, preferred language, disability, and housing status.

REALD & SOGI Data Repository

The REALD (race, ethnicity, language and disability) and SOGI (sexual orientation and gender identity) Data Repository began development in 2022 in OHA's Equity & Inclusion (E&I) Division to maximize the use of REALD data, drawing from the ONE eligibility system as well as high quality REALD data from other internal sources (Birth Certificate and Acute and Communicable Disease data (e.g., COVID)). Additionally, OHA is now ingesting data from medical providers via CSV standard formats, and directly from provider offices via the Patient Facing Survey Tool which utilizes an embedded QR code for flexible data collection. Currently, over 90% of the records in the Repository include demographic data from Medicaid members.

As a result of ingesting and processing data from REALD compliant data sources, the Repository can now share more complete and quality REALD & SOGI data as appropriate and approved via governance. Due to the approach taken in maximizing data quality and data completeness among all data sources in the Repository as well as leveraging multiple sources of data for the same person, the E&I Division is able to significantly reduce non-responses. For example, in a data pull on July 8th, 2024, with Medicaid members with additional data sources, the E&I Division found that the percent of non-responses for primary race/ethnicity decreased from 22.7% to 5.8%.

For more information, see OHA Equity & Inclusion REALD & SOGI Legislative Report 2024.

T-MSIS Analytic File

A potential option for acquiring Medicaid data from other states is the use of the CMS T-MSIS Analytic File (TAF). The TAF is a research-optimized version of the Transformed Medicaid Statistical Information System (T-MSIS) data that is specifically designed to meet the needs of the Medicaid and CHIP data user community. The T-MSIS initiative was developed to provide state Medicaid and CHIP programs with more comprehensive and robust data files and data elements. The TAF includes demographic and eligibility information for all Medicaid and CHIP members, as well as claims data on service use and payments.

The TAF is only available for approved research activities through CMS due to privacy and security concerns. Given that the T-MSIS files are extensive and complex, they can be challenging to use directly for analytic purposes. Therefore, CMS has developed the TAF, which consists of research identifiable files (RIFs) optimized for analytics. Researchers must adhere to strict privacy and security guidelines when accessing and using the data.