

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
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State Demonstrations Group

January 26, 2022

Dana Hittle
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Dear Ms. Hittle:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the Oregon Health Plan Interim Evaluation Report, which is required by the Special Terms and Conditions (STCs) of Oregon's section 1115 demonstration, "Oregon Health Plan" (Project Nos: 21-W-000 13/10 and 11-W-00160/10). The demonstration is authorized from January 12, 2017 through June 30, 2022. CMS determined that the Interim Evaluation Report, which was submitted on June 28, 2021 and revised on October 15, 2021, is in alignment with the approved Evaluation Design and the requirements set forth in the STCs, and therefore, approves the state's Interim Evaluation Report. In accordance with the STCs, the approved Interim Evaluation Report may now be posted to the state's Medicaid website within thirty days. CMS will also post the Evaluation Report on Medicaid.gov.

The report is organized around four thematic goals of the demonstration: behavioral health integration, oral health integration, expanding CCO use of health-related services (HRS), and improving health outcomes for dually-eligible individuals. The report shows that considerable progress has been made toward achieving these goals over the course of the demonstration time period, although caution in interpretation of these results is warranted as these findings may have been impacted by policies and programs outside of this demonstration. Overall and potentially-avoidable emergency department (ED) utilization for behavioral healthcare declined by 10.6% between 2016 and 2019. ED use for non-traumatic dental conditions also decreased by 17%, while ED spending for dental conditions declined 6% from 2016 to 2019. Access to dental care also appears to have improved over this time period. Integration of care particularly improved for children, as the share of children who received physical, mental, and dental assessments increased by 13.3% between 2016 and 2019. CCOs have also increased spending on HRS, from \$7.2 million in 2016 to \$16.2 million in 2019. Community benefit initiatives such as housing, food security and care coordination programs represented the largest share of HRS spending, though spending patterns and amounts varied between CCOs. Finally, behavioral health

outpatient visits for dual-eligible members increased. However, the state was unable to estimate the impact of passive enrollment (a policy which was implemented in 2019) because data on dual-eligible members was only available up to 2018. The Final Evaluation Report may provide greater insight into demonstration effects in these areas.

We look forward to our continued partnership on the Oregon Health Plan section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly
-S



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Director
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cc: Nikki Lemmon, Oregon State Lead, CMS Medicaid and CHIP Operations Group

Evaluation of Oregon's 2017-2022 Medicaid Waiver

INTERIM REPORT

October 15, 2021

CENTER FOR HEALTH SYSTEMS EFFECTIVENESS



Prepared for:
Oregon Health Authority



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About Us

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

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

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Acronyms

AOD – Alcohol or Other Drug

APAC – All Payer All Claims

APM – Alternative Payment Model

A.R.C. – Addiction Recovery Center

CAC – Community Advisory Council

CAHPS – Consumer Assessment of Healthcare Providers and Systems

CARES – Coronavirus Aid, Relief and Economic Security

CBO – Community-Based Organization

CCO – Coordinated Care Organization

CCBHC – Certified Community Behavioral Health Clinic

CDPS – Chronic Illness and Disability Payment System

CHSE – Center for Health Systems Effectiveness

CIE – Community Information Exchange

CMS – Centers for Medicare & Medicaid Services

CPC+ – Comprehensive Primary Care Plus

DCO – Dental Care Organization

DID – Difference-in-Differences

D-SNP – Dual-eligible Special Needs Plan

ED – Emergency Department

EDIE – Emergency Department Information Exchange

FBDE – Full-Benefit Dual-Eligible

FFS – Fee-For-Service

FQHC – Federally Qualified Health Center

HCBS – Home and Community-Based Services

HCP-LAN – Health Care Payment Learning and Action Network

HEDIS – Healthcare Effectiveness Data and Information Set

HIT – Health Information Technology

HRS – Health-Related Services

HSD – Health Systems Division

MA – Medicare Advantage

MAC – Medicaid Advisory Council

MCO – Managed Care Organization

MLR – Medical Loss Ratio

MM – Member Months

MMIS – Medicaid Management Information System

OAR – Oregon Administrative Rules

ODHS – Oregon Department of Human Services

OHA – Oregon Health Authority

OHP – Oregon Health Plan

OHPB – Oregon Health Policy Board

PCPCH – Patient Centered Primary Care Home

PHE – Public Health Emergency

PMPM – Per Member per Month

REALD – Race, Ethnicity, Language and Disability

ROI – Return on Investment

SDOH – Social Determinants of Health

SHARE – Supporting Health for All through Reinvestment

SPA – State Plan Amendment

SPMI – Severe and Persistent Mental Illness

SMI – Severe Mental Illness

SUD – Substance Use Disorder

THW – Traditional Health Worker

Executive Summary

In 2017, Oregon executed a five-year renewal of its 1115 Medicaid waiver with the Centers for Medicare & Medicaid Services (CMS). The Oregon Health Authority (OHA) selected Oregon Health & Science University's Center for Health Systems Effectiveness (CHSE) to carry out an evaluation of the 2017-2022 waiver renewal, and this report presents results from the interim evaluation. The evaluation focused on four areas: behavioral health integration, oral health integration, health-related services (HRS), and the population dually eligible for Medicare and Medicaid. CHSE assessed data from 2011-2019, capturing the initiation of Oregon's Coordinated Care Organization (CCO) model under the 2012-2017 waiver and including three years of experience (2017-2019) under the renewal. Our assessment did not include performance under new CCO contracts (CCO 2.0) effective in 2020, nor did it assess impacts of the COVID-19 pandemic.

Summary of Findings

Under Oregon's 2017-2022 Medicaid waiver renewal, the state continued with the goals of the CCO model, including a commitment to limit increases in per capita spending and improve health care access and quality. The waiver renewal included a strengthened focus on integrating physical, behavioral, and oral health care. The renewal encouraged more significant investments in HRS, previously known as "flexible services," to address social determinants of health (SDOH). Additionally, the waiver renewal established that Medicare and Medicaid dually eligible individuals could be passively enrolled by the state into a CCO, moving from an "opt-in" to an "opt-out" model.

Behavioral Health Integration: Progress on behavioral health integration has been mixed.

Behavioral health integration was a focus of the 2012-2017 waiver and an area identified as a priority in the waiver renewal. However, progress has been mixed. Overall, the evaluation team found it difficult to identify a well-articulated definition, set of goals, or milestones for behavioral health integration.

- During the 2017-2019 period, the state and CCOs engaged in several activities focused on behavioral health integration. Oregon participated in the Substance Abuse and Mental Health Services Administration's Certified Community Behavioral Health Clinics (CCBHC) Demonstration project, which currently includes 21 sites throughout Oregon, serving approximately 50,000 individuals per year. The state supported a Behavioral Health Collaborative and created a Behavioral Health Information Technology Workgroup. As part of "CCO 2.0" contracting effective in 2020, the state made substantial changes to the contracting mechanism in an effort to reduce the separation of behavioral health and physical health financing. (As mentioned, this report uses data through 2019 and therefore could not assess any changes associated with CCO 2.0.) Despite these initiatives, it is difficult to discern a roadmap or strategy for implementing behavioral health integration. Many of the activities focused on behavioral health integration do not appear to be coordinated across the state. In contrast to the work on HRS, the documentation of models, efforts, or milestones around behavioral health integration is unavailable or outdated.
- Some utilization and quality measures moved in the desired direction between 2016 and 2019, including decreasing ED visits and avoidable ED visits for members with behavioral health

conditions and increasing outpatient visits. Expenditures for individuals with behavioral health conditions began to increase in 2016, rising by approximately 3% annually between 2016 and 2019. The percentage of enrollees diagnosed with a substance use disorder (SUD) increased substantially during the period covered by this evaluation, moving from 3.4% in 2011 to 8.3% in 2019.

- Between 2016 and 2019, care coordination and access for non-English speaking individuals with behavioral health conditions worsened relative to English speaking individuals with behavioral health conditions.

Oral Health Integration: Efforts to advance oral health integration appear to be having some positive effects.

Like behavioral health, integration of oral health services with physical health services has been a goal of Oregon's Medicaid transformation since 2012. The 2017-2022 waiver called on CCOs to implement recommendations from the state's 2016 Oral Health Roadmap, including integrating oral health into Patient Centered Primary Care Home (PCPCH) standards and practices and improving internal coordination on oral health within OHA.

- During the first three years of the renewal, OHA worked to address access barriers associated with oral health provider shortages and member awareness of dental benefits. In 2019, OHA worked with staff at PCPCHs to develop standards for oral health integration, and OHA's Transformation Center assisted CCOs in implementing oral health integration pilot projects. Other efforts included increases in payment rates, expansion of teledentistry, and the introduction of new CCO incentive metrics for oral health.
- Measures of access to dental services and utilization of dental procedures improved between 2016 and 2019. Additional measures of oral health integration also moved in the desired direction. These improvements may reflect progress on oral health integration and increases in dental payment rates implemented in 2018.
- Spending on dental services outside the ED increased between 2016 and 2019. These changes likely reflect increases in payment rates for dental services implemented in 2018 as well as increased access to needed services.
- Between 2016 and 2019, improvements in oral health access measures were somewhat greater for non-English speaking individuals compared to English speaking individuals. Access increases were also slightly more pronounced among children compared to adults.

Health Related Services: The state has expanded its mechanisms to support HRS, with early signs that CCOs are responding positively.

One finding of the 2012-2017 waiver evaluation was that spending on flexible services was lower than anticipated, with less than 0.1% of all spending attributable to flexible services in 2015. The lack of spending on flexible services was tied to a variety of factors, including confusion about what might qualify as flexible services, how spending on flexible services would factor into the Medical Loss Ratio (MLR), and whether spending on flexible services might adversely affect rate setting. The waiver renewal included a variety of responses to these challenges. HRS were defined to include flexible services and community benefit initiatives, with the state providing examples of what would qualify as HRS. The waiver also clarified that spending on HRS would be included in the numerator of the MLR.

- During the first three years of the waiver renewal, the state issued additional guidance on the types of spending that could qualify as HRS and how CCOs could use HRS to address SDOH.

The state also began developing adjustments to capitation rate setting to mitigate “premium slide” (a scenario in which increased spending on HRS might lead to lower capitation rates). In addition, the state is in the process of implementing a program that complements HRS, the Supporting Health for All through Reinvestment (SHARE) Initiative, which requires a portion of CCOs’ profits to be spent on SDOH domains. Across all of these activities, the OHA’s Transformation Center has provided a substantial amount of technical assistance to facilitate the understanding and use of HRS.

- Although it is still early, available data suggest that CCOs increased their HRS expenditures substantially, from \$7.2 million in 2016 (\$0.66 per member per month) to more than \$16.2 million in 2019 (\$1.51 per member per month). In interviews, CCOs indicated that much of this growth reflected their efforts to report existing SDOH programs as HRS spending. CCOs appear to have established new connections with community-based organizations and have expanded their toolkits for gathering information, conducting outreach, and deploying HRS funds to address SDOH. However, as of 2019, HRS remained a small share (0.36%) of spending on member services.
- Despite these encouraging trends, there are a variety of issues that OHA should monitor. These include the costs and benefits of standardized definitions and reporting of HRS spending across CCOs and tracking the administrative and financial burden associated with HRS data collection and reporting. Furthermore, OHA has an opportunity to contribute to the evidence base for HRS as well as using existing and emerging evidence to guide HRS investments.

Impacts of a CCO Closure: The departure of FamilyCare in 2017 did not appear to result in adverse behavioral health or oral health outcomes for members in the Portland tri-county area.

During the evaluation period, the FamilyCare CCO exited the market, with most of its 113,000 members transitioning to coverage by Health Share of Oregon. We found that most behavioral and oral health measures were unchanged or showed modest improvements for enrollees in the tri-county area relative to other areas following the exit of FamilyCare. However, total expenditures for individuals with behavioral health conditions increased more in the tri-county area than in other parts of the state. OHA should consider assessing whether these increased expenditures were associated with improvements in access and quality or simply greater utilization of services.

Dual-Eligible Members: Care for dual-eligible members did not seem to change substantially from 2016 to 2018. Data available for the interim analysis did not allow for an assessment of the effects of passive enrollment in CCOs.

The waiver renewal aims to simplify coverage and choices for beneficiaries who are dually eligible for Medicare and Medicaid through passive enrollment in CCOs, with the option to opt-out and return to the state’s FFS program at any point in time.

- Oregon implemented passive enrollment in CCOs for dual-eligible members in 2019. Prior to 2019, dual-eligible members were enrolled in FFS coverage by default but could choose to enroll in a CCO (an “opt-in” model).
- Results for measures of health care access, quality, and spending suggest that care for dual-eligible members did not change substantially from 2016 to 2018. Outpatient visits increased, particularly for behavioral health, whereas access to primary and preventive care were relatively flat. Declines in ED utilization and avoidable ED visits were limited to dual-eligible members residing in urban areas. Total spending increased from 2016 to 2018 for dual-eligible members in isolated and rural areas.

- Our analyses used data through 2018 and therefore did not capture any impact of the 2019 change to passive enrollment in CCOs. Likewise, the evaluation did not assess the impact of new requirements for Medicare Advantage plan alignment implemented through CCO 2.0 contracts.

Recommendations

Based on findings from this evaluation, and factoring in OHA's strategic goal of eliminating health inequities by 2030, we present 13 recommendations, categorized into five areas.

Behavioral Health Integration

Recommendation 1. Provide a strategic plan and vision for behavioral health integration (at the financial and delivery system levels), including what milestones should serve as indicators of progress, especially for communities most impacted by health inequities. It is currently difficult to discern what activities or populations CCOs are expected to prioritize, how integration will be measured, or what the future state should look like.

Recommendation 2. Reconsider the way accountability for behavioral health is shared or assigned within and outside of OHA. The state should investigate where roles may be unclear and consider options for providing clarity. Oregon is undertaking a range of ambitious activities that address mental health and SUD. Coordination and accountability will be necessary to ensure these funds are deployed efficiently and the initiatives achieve their aims. The 2019 appointment of Steve Allen as the state's new Behavioral Health Director offers an opportunity to reduce ambiguity about who is responsible or empowered to facilitate change.

Recommendation 3. Consider the needs of multiple populations and systems of care, particularly for communities most impacted by health inequities. Adults with serious mental illness and children with serious emotional disorders may require different models of care beyond behavioral health services that are integrated at the primary care site. Because racial and ethnic disparities may be particularly acute in behavioral health services, OHA should consider efforts that specifically target the intersection of equity and behavioral health.

Oral Health Integration

Recommendation 4. The state should continue to build on its apparent successes in the area of oral health integration. Overall, claims- and survey-based measures suggested that access to services and the quality of oral health care have improved.

Recommendation 5. OHA's incoming Dental Director should be tasked with strengthening communication and coordination across OHA on oral health, building a shared definition of oral health integration that aligns with the goal to end health inequities, defining milestones for delivery system and financial integration, and organizing the agency's activities strategically to achieve these milestones.

Health-Related Services

Recommendation 6. Continue refining guidance on reporting of HRS expenditures to promote consistency across CCOs. Some of the differences in reported spending on HRS appear to be related to definitions instead of real differences in investments in HRS or SDOH.

Recommendation 7. Monitor the administrative and financial burden on CCOs that is associated with collecting and reporting HRS data. This will require OHA to consider the balance between the administrative burden, which may be disproportionately felt by communities most impacted by health inequities, and the need for data to understand the impact on outcomes for the Medicaid population.

Recommendation 8. Continue to develop the evidence base for HRS and investments in SDOH. Oregon can play an important role in providing robust, credible evidence on the impacts of these investments, which will help shape programs within the state and beyond.

Recommendation 9. Identify areas where capacity or resources restrict CCOs' ability to affect SDOH. In some regions, housing shortages and the lack of affordable options may create significant challenges in helping enrollees obtain stable housing. OHA should assess opportunities to address houselessness broadly – including opportunities to weave or braid funding from multiple sources to create more extensive systems-based solutions.

Health Equity

Recommendation 10. In addition to “health equity,” state rules and guidance documents use equity-related terms such as “social determinants of equity” (SDOE) and “social determinants of health and equity” (SDOH-E). Each of these has a slightly different application and definition, but the nuances may be lost to a larger audience. Further separation and articulation of the meaning of these terms would reduce the risk of confusion and conflation of priorities.

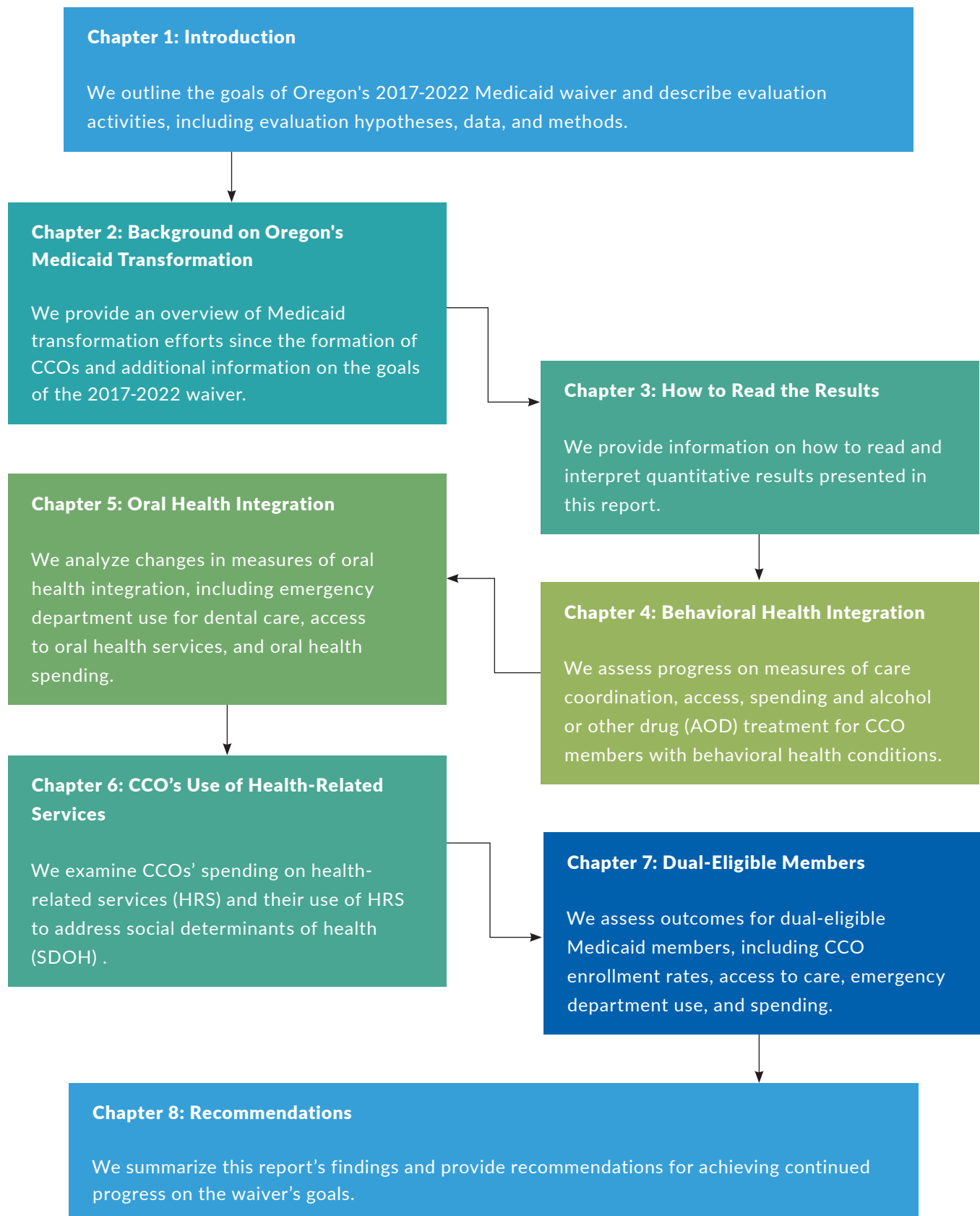
Recommendation 11. Health equity has been identified by OHA leadership as a clear priority, adopting a 10-year goal to eliminate health inequities by 2030. This requires engagement with communities most impacted by health inequities to prioritize initiatives and interventions. Current data systems limit the state's ability to achieve this, due to a lack of information on race and ethnicity. OHA should continue to support CCOs in collecting Race, Ethnicity, Language, and Disability (REALD) data and ensure that resources are available to manage and maintain these data. To track progress, OHA should monitor and report on the percentage of members for whom REALD data are collected.

Dual-Eligible Members

Recommendation 12. Oregon implemented passive enrollment in CCOs for dual-eligible members starting in 2019. The waiver evaluation is intended to assess the impacts of passive enrollment on health care access, quality, and spending for this population. However, the most recent data available for interim analyses covered 2018 and therefore did not capture any such effects. Future evaluation work should assess changes occurring with the introduction of this policy.

Recommendation 13. CCO 2.0 introduced new requirements intended to increase enrollment of dual-eligible members in Medicare Advantage plans provided by (or affiliated with) their CCO. Research suggests that alignment of Medicare and Medicaid plans may contribute to improved outcomes. To assess whether this occurs and inform future policy development, OHA should consider monitoring rates of enrollment of dual-eligible members in aligned plans over time and tracking outcomes for dual-eligible members enrolled in aligned versus non-aligned plans.

Roadmap to the Report



Introduction

Overview

In January 2017, Oregon obtained approval from the Centers for Medicare & Medicaid Services (CMS) to extend its Section 1115 Medicaid waiver, the “Oregon Health Plan” (OHP), effective from January 12, 2017 through June 30, 2022. The Oregon Health Authority (OHA), the agency that oversees Oregon’s Medicaid program, selected Oregon Health & Science University’s Center for Health Systems Effectiveness (CHSE) as the independent evaluator of the 2017-2022 waiver.

This report presents results from CHSE’s interim evaluation of performance during the first three years of the waiver (2017-2019). We assess progress in four key areas: behavioral health integration, oral health integration, the use of health-related services (HRS) – a mechanism for addressing social determinants of health (SDOH) – and program enhancements for individuals who are dually enrolled in Medicaid and Medicare.

Oregon’s 2017-2022 Medicaid Waiver

Medicaid demonstration waivers give states flexibility to test innovative approaches to health care delivery and payment. In 2012, Oregon used a Section 1115 Medicaid demonstration waiver with CMS to transform its Medicaid program, establishing sixteen “Coordinated Care Organizations,” or CCOs, to provide comprehensive care for its Medicaid population. As part of its waiver and transition to the CCO model, the state committed to reducing spending growth, and improving access and quality for its Medicaid members. The 2017-2022 waiver renewal allows Oregon to continue enhancing the CCO model to achieve four key goals:¹

1. Enhance Oregon’s Medicaid delivery system transformation with a stronger focus on integration of physical, behavioral, and oral health care through a performance-driven system aimed at improving health outcomes and continuing to bend the cost curve.
2. Increase the state’s focus on encouraging CCOs to address SDOH and improve health equity for communities of color and across all low-income or vulnerable Oregonians to improve population health outcomes.
3. Commit to an ongoing sustainable rate of growth, and adopt a payment methodology and contracting protocol for CCOs that promotes increased investments in HRS and advances the use of value-based payments.
4. Expand the coordinated care model by implementing innovative strategies for providing high-quality, cost-effective, person-centered health care for Medicaid and Medicare dual-eligible members.

Oregon’s waiver renewal includes a variety of other changes, including:

- Extension of the state’s Hospital Transformation Performance Program, which provides incentive payments to participating hospitals for adopting initiatives for quality improvement, through June 30, 2018. After that date, hospital pay-for-performance payments would transition to CCO contracts.
- Conversion of the tribal uncompensated care payments to a Medicaid benefit.

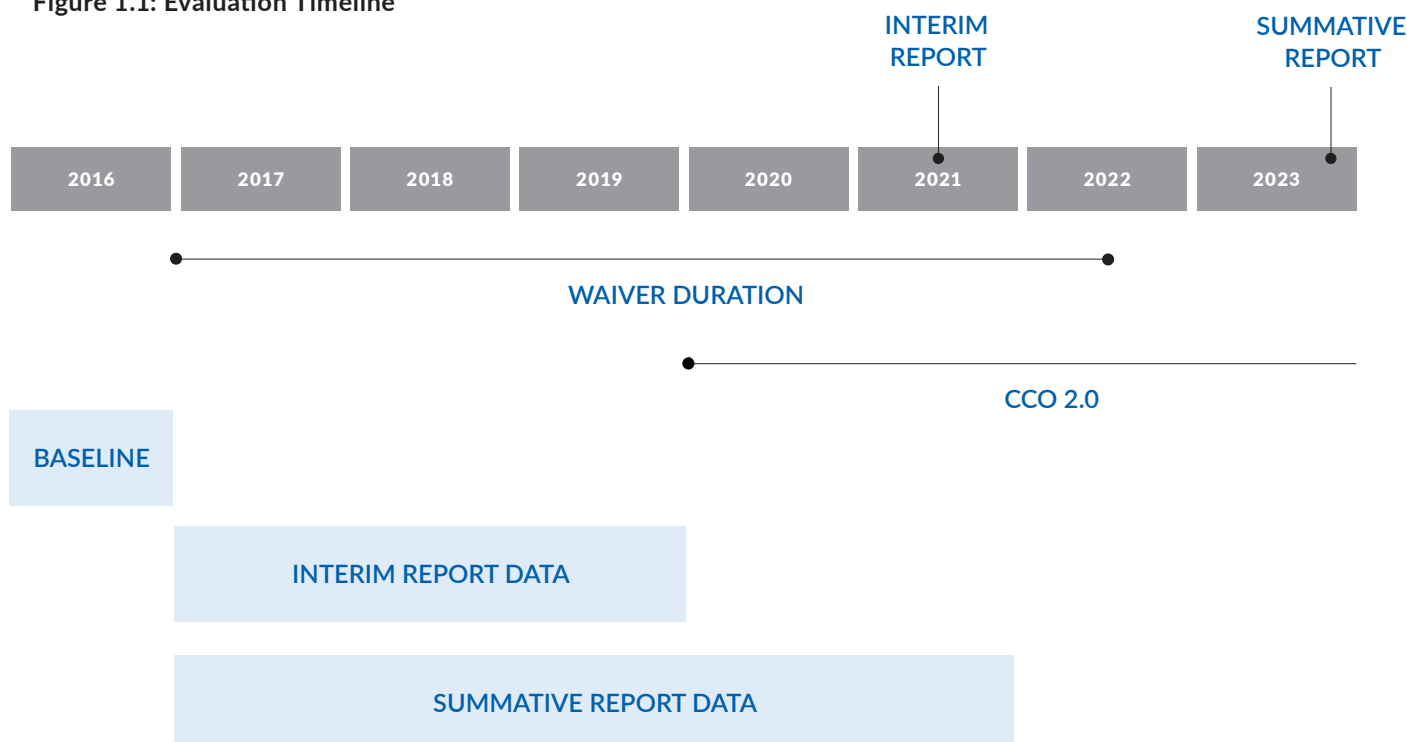
- Specifying that the waiver will not impact American Indian and Alaska Native (AI/AN) rights to exemption from managed care.
- Support for incentive payments for Comprehensive Primary Care Plus (CPC+) providers tied to outcomes for Medicaid members served by the state’s fee-for-service (FFS) delivery system.
- Establishing minimum requirements — such as inclusion of the Model Medicaid and CHIP Managed Care Addendum for Indian Health Care Providers, and a Model CCO Tribal Engagement and Collaboration Protocol — to ensure CCOs’ timely and equitable collaboration and communication with tribes and Indian Health Care Providers.

OHA used the introduction of new CCO contracts, “CCO 2.0”, effective from January 1, 2020, as a key mechanism for implementing program changes needed to achieve these goals. We describe these changes further in Chapter 2 and Appendix D.

Evaluation Activities

Section 1115 Medicaid waivers require states to contract with an independent evaluator to test hypotheses for delivery system outcomes such as quality, access, and cost. Oregon selected CHSE as the independent evaluator to carry out the waiver evaluation according to the CMS-approved evaluation design.² The evaluation includes two key products: this interim report, to be delivered to CMS by June 30, 2021, and a summative evaluation report due to CMS by December 31, 2023. Figure 1.1 summarizes timelines and deliverables for the evaluation per CHSE’s contract with OHA. This report covers data through 2019 and therefore does not capture changes associated with the implementation of CCO 2.0. Additionally, the study period ends before the COVID-19 pandemic hit the U.S. in early 2020. The summative evaluation, including data through 2021, will assess performance during the pandemic and the first two years of CCO 2.0. Box 1.1 clarifies how to read this report in view of these events.

Figure 1.1: Evaluation Timeline



Box 1.1: How to Read this Report

Readers of this report are encouraged to interpret results within the context of Oregon's implementation efforts through December 2019. The interim evaluation relies on quantitative data through 2019, and therefore does not assess performance under CCO 2.0 or during the COVID-19 pandemic, which both began in early 2020. Data collection for 2020 was limited to qualitative information from CCO interviews relating to the use of HRS. As such, the findings in this report reflect early successes and challenges in implementing the provisions of the waiver renewal. The summative evaluation (featuring data through 2021) will address the ways in which CCO 2.0 implementation and COVID-19 may have affected Oregon's progress and goals set out in the renewal. To set the stage for these analyses, Appendices D and F provide relevant information on CCO 2.0 and actions taken to support the Medicaid delivery system during COVID-19, respectively.

Questions and Hypotheses

The CMS-approved evaluation design features four evaluation questions focusing on behavioral health integration, oral health integration, HRS, and the dual-eligible population. Each question is associated with several hypotheses, as shown in Exhibit 1.1 below.

Exhibit 1.1: Evaluation Questions and Hypotheses

| Evaluation Question | Hypothesis |
|--|--|
| 1 What progress has been made in integrating behavioral and physical health care for Oregon's Medicaid population? What effects has increased integration had on access, quality, and costs? | 1.1 Coordination of care for CCO members with behavioral health diagnoses will improve. |
| | 1.2 The ability to identify and refer members to substance abuse interventions will improve over time. |
| | 1.3 Integration of behavioral health services will improve access for CCO members with severe mental illness. |
| | 1.4 Integration of behavioral health services with physical health services will be associated with reduced growth of total spending and spending on high-cost settings (e.g. ED and inpatient), and with sustained or increased spending on primary or preventive care, for CCO members with behavioral health diagnoses. |

Exhibit 1.1: Evaluation Questions and Hypotheses (continued)

| | | | |
|---|---|-----|--|
| 2 | What progress has been made in integrating oral and physical health care for Oregon's Medicaid population? What effects has increased integration had on access, quality, and costs? | 2.1 | Emergency dental visits for non-traumatic dental reasons will reduce over time for CCO enrollees. |
| | | 2.2 | Access to oral health services and dental care will improve for CCO enrollees. |
| | | 2.3 | Integration & coordination of oral health with other health services will improve for CCO enrollees. |
| | | 2.4 | Integration of oral health services with physical health services will be associated with reduced growth of spending on oral health services in high-cost settings (e.g., ED) and sustained or increased spending on preventive oral health services |
| 3 | What degree of adoption of HRS has occurred? How do patients experience HRS, and what impact does receipt of HRS have on quality and costs? | 3.1 | Provision and utilization of HRS (previously known as flexible services) will increase over time. |
| | | 3.2 | Enrollees receiving HRS will report satisfaction with those services and better patient experience overall. |
| | | 3.3 | Use of HRS will be associated with reduced utilization of more intensive or higher-cost care. |
| | | 3.4 | Use of HRS will help address social determinants of health to improve individual and population health outcomes. |
| | | 3.5 | Use of HRS will be associated with reduced growth of total spending and spending in high-cost settings (e.g., ED and inpatient) and with sustained or increased spending on primary or preventive care. |
| 4 | What is the rate of uptake of CCO enrollment among dual-eligible members (those who are newly eligible and those previously in FFS)? What impact has CCO enrollment had on quality and costs for dual-eligible members? | 4.1 | The proportion of dual-eligible members enrolled in a CCO will increase compared with past demonstration levels without loss of member satisfaction. |
| | | 4.2 | CCO enrollment will encourage appropriate use of clinical resources and ancillary care for dual-eligible members. |

Source: Centers for Medicare & Medicaid Services. (2017). *Special Terms and Conditions—Oregon Health Plan 21-W-00013/10 and 11-W-00160/10*. Attachment B – Evaluation Design.

Evaluation Data and Analyses

CHSE's interim evaluation addresses these questions and hypotheses mainly through quantitative analyses of outcome measures related to quality, access and spending, with a qualitative component for assessing CCOs' adoption of HRS. Outcome measures associated with each hypothesis, identified in collaboration with OHA, are listed in Appendix A. Below we provide an overview of evaluation data, study populations, and quantitative methods. Further details on quantitative and qualitative methods can be found in Appendices B and C, respectively.

Data

We rely on the following data sources to calculate outcome measures for the evaluation:

- Medicaid claims/encounters and enrollment records from OHA's Health Systems Division (HSD).
- Medicare claims/encounters and enrollment records from OHA's All Payer All Claims Database (APAC).
- Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey responses from the Medicaid CAHPS survey administered by OHA.
- Specialized data extracts from OHA, required to calculate two evaluation measures (Screening, Brief Intervention, and Referral to Treatment and Assessments within 60 Days for Children in Oregon Department of Human Services Custody).

We use data spanning the years 2011-2019, allowing us to assess performance over the full course of the 2012-2017 waiver and the first three years of the 2017-2022 waiver.

In addition, to address hypotheses related to HRS, we use spending data from CCOs' "Exhibit L" financial reports for the years 2014 through 2019. We also incorporate qualitative data from interviews with CCO representatives. Interviews addressed CCOs' approaches to providing HRS and their use of HRS to address SDOH. We conducted a total of 12 interviews in the second half of 2020, with two to five informants in each interview. Interviewees held diverse CCO roles, including CEO, CFO, medical officer, and positions in community engagement, health equity, and government affairs.

Study Populations

The study population for evaluation questions 1 (behavioral health integration), 2 (oral health integration) and 3 (HRS) consists of members enrolled in a CCO who are not dually eligible for Medicare and Medicaid. For evaluation question 4, the study population is limited to dual-eligible members, including members enrolled in FFS Medicaid. For behavioral health integration measures, we define subpopulations as members with Severe and Persistent Mental Illness (SPMI) and Substance Use Disorder (SUD). Technical definitions for these subpopulations can be found in Appendix B.

For measures related to evaluation questions 1-3, we further stratify analyses by subgroups based on age, gender (binary definition), geography of residence (urban, rural, isolated), disability (disabled, not disabled), and the presence of chronic physical health conditions. For measures associated with evaluation question 4 (dual-eligible members), we stratify by geography of residence only. Due to data quality concerns, the current report does not show results stratified by race/ethnicity. We anticipate incorporating race/ethnicity data in the summative report; see Box 1.2 below for details.

Additionally, for measures assessing oral and behavioral health integration, we examine outcomes for populations of focus, defined in the evaluation design as “groups that have historically experienced disproportionately poor health outcomes, or that have been identified by Oregon’s leadership as appropriate populations on which to focus the state’s health improvement efforts.”³ In consultation with OHA, we selected two focus populations:

- Children, defined as individuals under the age of 18.
- Individuals with limited English language proficiency, defined as persons from a household where the main language spoken is not English, based on HSD enrollment data. (For brevity, we refer to these individuals as “non-English speaking members.”)

We compare outcomes for each focus population to a “reference” population, representing a “group that has historically experienced favorable health outcomes relative to other groups with respect to the particular outcome or issue under examination.”⁴ We use adults and members from households where the main language spoken is English (“English speaking members”), respectively, as reference groups for the selected focus populations.

Box 1.2: Use of Race and Ethnicity Data in the Evaluation

This report does not present outcomes by race/ethnicity due to concerns about the validity of this information in the Medicaid enrollment files obtained from HSD. Beginning in 2017, the enrollment data showed a significant increase in both the number and percentage of adult Medicaid recipients for whom race was reported as unknown/missing/other, with the percentage reaching 40% by 2019. This appears to have been driven largely by a decline in the percentage of enrollees identifying as white or Hispanic.

For the summative report, which will cover data through 2021, we anticipate using race/ethnicity and other demographic information collected according to Race, Ethnicity, Language and Disability (REALD) standards to assess health disparities among Medicaid members. Appendix E provides background on the development of REALD standards and OHA’s activities in 2020 to enhance REALD data collection. The summative report will stratify results and adjust outcomes for race, ethnicity and other demographic characteristics.

Chapters 4 and 5 of this report evaluate outcomes for two populations of focus; individuals with limited English language proficiency and persons under the age of 18. We assess how outcomes changed for these populations and whether disparities between focus and reference populations were reduced during the initial three years of the waiver renewal.

Reference:

Centers for Medicare & Medicaid Services. (2017). *Special Terms and Conditions—Oregon Health Plan 21-W-00013/10 and 11-W-00160/10. Attachment B – Evaluation Design.*

Quantitative Analyses

The evaluation plan includes two types of quantitative analyses. First, we use claims data to evaluate changes in outcome measures among Oregon’s Medicaid members. We conduct the following analyses for each measure:

1. Determine whether the study population met the target or benchmark for the measure.

2. Analyze the change in the measure across the study population as a whole and within subgroups.
3. Analyze the change in the measure for populations of focus compared to reference populations.

Second, to address hypothesis 3.1, we conduct descriptive analyses of CCO spending on HRS using data from CCOs' Exhibit L reports.

We define the "target" for each measure as an improvement over the mean performance in 2015-2016. We use mean performance in 2015-16 as a historical benchmark to capture Oregon's performance prior to the waiver renewal in the two years following Medicaid expansion. This benchmark was defined in consultation with OHA. To analyze changes in measures, we use regression modeling to adjust for demographic factors and risk. We use 2016 as the primary baseline for measuring change across the study population. In addition to being the last full calendar year of the 2012-2017 waiver, 2016 occurs after the 2014 Medicaid expansion and after the 2015 transition to ICD-10 codes, allowing for more consistent comparison over time. We perform additional regression analyses using 2011 data (where available) as the baseline, measuring changes since before the inception of CCOs. For behavioral and oral health integration measures, we also analyze outcome changes for populations of focus, using difference-in-differences modeling to determine whether gaps between focus and reference populations decreased or increased. Appendix B provides further details on quantitative methods.

Structure of this Report

Chapter 2 of this report provides an overview of Oregon's Medicaid transformation efforts since the formation of CCOs. We provide additional information on the goals of the 2017-2022 waiver and describe the development of new CCO contracts effective in 2020.

Chapter 3 provides information on how to read and interpret quantitative results presented in this report.

Chapter 4 assesses the state's progress on integration of behavioral and physical health care and explores the effects of integration on access, quality and costs. First, we provide an overview of behavioral health integration activities under the 2017-2022 waiver. We then assess outcomes for coordination of care for CCO members with behavioral health diagnoses, referral to SUD treatment, access for CCO members with behavioral health conditions, and spending. We report regression-adjusted changes in measures for the CCO-enrolled non-dual-eligible population, stratify results by subgroup, and compare changes for non-English speaking members versus English speaking members.

Chapter 5 describes oral health integration activities under the 2017-2022 waiver and assesses progress on measures relating to ED use for dental visits, access to oral health services, integration of oral health and other health services, and oral health spending. We report regression-adjusted changes in measures for the CCO-enrolled non-dual eligible population, stratifying by subgroup and comparing changes for focus populations versus reference populations.

Chapter 6 examines CCOs' spending on HRS. We explore annual trends in per member per month HRS spending, variation in spending among CCOs, and the distribution of spending across HRS types (flexible services, community benefit initiatives, and health IT) and categories (housing,

care coordination, transportation, etc.). We use information from CCO interviews to interpret and contextualize spending data. In addition, we present interview findings on CCOs' approaches to using HRS for addressing SDOH.

Chapter 7 analyzes outcomes for dual-eligible Medicaid members, including CCO enrollment rates, utilization of clinical and ancillary care, and per member per month spending. We report regression-adjusted changes in measures for the dual-eligible population overall and stratified by residence in urban, rural and isolated geographies.

Chapter 8 summarizes this report's findings and provides recommendations for achieving continued progress on the waiver's goals.

Appendices A through C provide details on quantitative and qualitative evaluation methods.

Appendix D summarizes changes to Oregon's Medicaid program implemented through CCO 2.0 contracts, including efforts to enhance capacity to address SDOH and promote health equity.

Appendix E provides information on the REALD protocol used in Oregon since 2014 for collecting demographic data.

Appendix F describes changes to Oregon's Medicaid program introduced in 2020 in response to the COVID-19 pandemic.

Appendix G provides supplemental results, including sensitivity analyses exploring differences in behavioral and oral health outcomes associated with the closure of a CCO in the tri-county region.

Background on Oregon's Medicaid Transformation

Overview

This chapter provides a summary of Oregon's Medicaid transformation efforts since the creation of CCOs in 2012 through to 2019. We first briefly describe Oregon's 2012-2017 Medicaid waiver and how it laid the foundation for initiatives under the 2017-2022 waiver renewal. Next, we provide additional information on the goals of the waiver renewal. Finally, we describe Oregon's process for developing new five-year CCO contracts effective in 2020.

Oregon's 2012-2017 Waiver

Oregon's 2012-2017 waiver marked the creation of the CCO model and the beginning of a major change in the state's Medicaid program. Some CCOs formed from a single managed care organization (MCO), maintaining their contractual relationships with health care providers. Other CCOs formed from partnerships among MCOs, health systems, mental health organizations, dental care organizations, and county health departments. Ultimately, sixteen CCOs were approved to provide coverage for Oregon Medicaid members across the state. Most regions were served by a single CCO, although a few, including the Portland metropolitan area, were served by two CCOs.

The CCO model has similarities to both MCOs and accountable care organizations. However, the model is unique among Medicaid delivery systems. It includes a number of distinguishing characteristics:

Local governance with representation from health care providers, Medicaid members, and other community members. CCOs' governance structures are required to include health care providers, members of a community advisory council (CAC), and community members at large to ensure decision making is consistent with community values and priorities. The CACs were established to ensure that the health needs of CCOs' communities were being met. CACs are required to include representatives of the community and county government, with Medicaid members making up the majority. The 2012-2017 waiver included other provisions to ensure that CCOs responded to community needs: CCOs were required to establish agreements with local governments, carry out community health assessments, and develop community health improvement plans based on these assessments.

Global budgets covering physical, behavioral, and oral health care. CCOs receive global budgets: per capita payments to cover the cost of members' physical, behavioral, and oral health care. Adult non-SUD behavioral health residential services and certain mental health drugs are "carved out" of the global budget. CCOs are accountable for managing all services covered by the global budget. However, they have flexibility to allocate their global budgets to meet the needs of their members and communities. Global budgets placed CCOs "at risk" for all types of health care, creating a financial incentive to coordinate and integrate different types of care.

Flexibility to use funds to address SDOH. CCO budgets allow for local flexibility, including spending on services and supports that may not meet the definition of what has traditionally been thought of as “medically necessary.” CCOs have been encouraged to address their members’ social needs. The CCO model allows for spending outside the traditional medical system if such expenses can improve outcomes and reduce spending growth.

Payment for performance. CCOs are eligible to receive incentive payments from a state Quality Incentive Program (“quality pool”) for improving specific member outcomes, called CCO incentive measures. The Metrics and Scoring Committee, established by Oregon’s legislature in 2012, selects incentive measures and determines the performance benchmarks and improvement targets for awarding incentive payments. Incentive measures and performance goals are adjusted annually.

Accountability for health care access and quality. CCOs serve as a single point of accountability for members’ health care access and quality. The Oregon-CMS agreement required that the quality of care, as defined by 33 measures, would not diminish over time. In addition, OHA publicly reports CCOs’ performance on a variety of outcome measures on its website, reinforcing accountability.

Accountability for the growth in health care spending. Under its 2012-2017 waiver, Oregon committed to reducing the per capita Medicaid spending growth rate from a historical average of 5.4% to 3.4% within three years.

Most Medicaid members were required to enroll in a CCO. Members of Oregon’s Federally Recognized Tribes and Medicare and Medicaid dual-eligible members were allowed to choose CCO enrollment or FFS coverage. Medicaid members with special health needs were required to transition from FFS coverage to a CCO after receiving an individualized transition plan to meet their care needs. By 2014, almost 90% of the state’s one million Medicaid enrollees received care through CCOs, which included a mix of for-profit and not-for-profit organizations with varied enrollment size (from fewer than 15,000 enrollees to more than 200,000 enrollees).

The 2012-2017 waiver articulated six levers that served as a roadmap for health system transformation:

- **Lever 1:** Improving care coordination at all points in the system with an emphasis on Patient-Centered Primary Care Homes (PCPHs).
- **Lever 2:** Implementing value-based payment methodologies to focus on value and pay for improved outcomes.
- **Lever 3:** Integrating physical, behavioral, and oral health care structurally and in the model of care.
- **Lever 4:** Increased efficiency through administrative simplification and a more effective model of care.
- **Lever 5:** Use of flexible services to improve care delivery or enrollee health.
- **Lever 6:** Testing, accelerating, and spreading effective innovations and best practices.

The summative evaluation of Oregon’s 2012-2017 waiver, conducted by CHSE, found that the CCO model was associated with reductions in spending growth and improvements in some quality domains.⁵ Measures of care experience and self-reported health status for CCO members also

improved. Measures of access to care decreased slightly among CCO members, potentially due to the large increase in enrollment in the state as part of the 2014 Medicaid expansion. The evaluation also pointed to areas where change had not been as transformative as planned, including the integration of behavioral and oral health services and the use of flexible services to address social determinants of health.

Goals of the 2017-2022 Waiver

The waiver renewal, spanning January 12, 2017 through June 30, 2022, uses some of the original levers to drive health system transformation, building on the strengths of the CCO model while addressing some of its shortcomings. Figure 2.1 below summarizes the waiver's key goals and their relationship to the levers. The renewal emphasizes the following efforts:

An expanded focus on the integration of physical, behavioral, and oral health care through a performance-driven system (Goal 1). The financial and delivery system integration of physical, behavioral, and oral health have been core elements of the CCO model. The 2012-2017 experience, while promising, demonstrated that additional time, effort, and coordination among different sectors (e.g., health care, corrections systems, counties, other agencies) would be necessary to achieve full integration. During the demonstration renewal period, OHA and CCOs have committed to taking the following actions:

- Implementing and supporting models of care that promote integration, such as the Certified Community Behavioral Health Clinic (CCBHC) Demonstration project.
- Supporting Oregon's Behavioral Health Collaborative workgroups in developing and implementing a behavioral health framework that addresses the systemic and operational barriers to the integration of mental health and substance abuse services.
- Implementing recommendations from the December 2016 Oral Health Roadmap, including integrating oral health into PCPCH standards and practices, and enhancing internal coordination on oral health within OHA.

An enhanced focus on SDOH (Goal 2). With the waiver renewal, Oregon defined HRS to include flexible services (cost-effective services offered to an individual member to supplement covered benefits) and community benefit initiatives (interventions focused on improving population health and health care quality). HRS are not covered under Oregon's State Plan but are intended to improve overall beneficiary health and can be used to address SDOH. The evaluation of Oregon's 2012-2017 waiver found that spending on flexible services was relatively modest. Expenditures on flexible services were inhibited by several factors, including confusion over what was allowable, whether they would be counted as "administrative" vs. "medical" expenses, and concerns that expenditures on flexible services could lead to lower capitation rates for CCOs. The waiver renewal addresses several of these issues. CMS clarified that HRS are included in the Medical Loss Ratio (MLR) numerator and count toward rate development in the non-benefit load. The waiver also allows CCOs to earn financial incentives if they improve quality and control per capita cost growth through HRS.

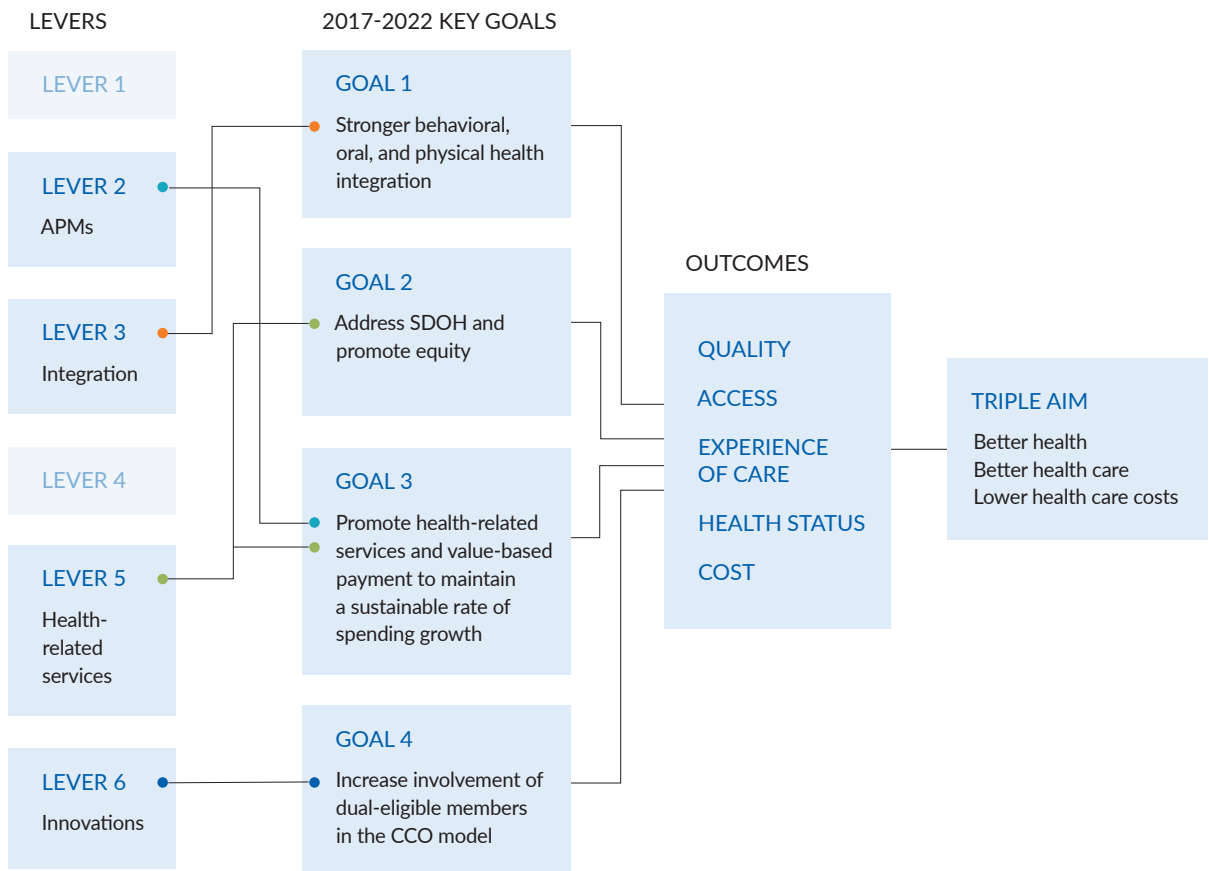
A commitment to an ongoing sustainable rate of growth of 3.4% (Goal 3). Continuing with the goal set out in the 2012-2017 waiver, the state must demonstrate that per capita spending growth remains below 3.4%. Oregon must report spending growth for each eligibility group

and in the aggregate, although the savings reduction requirement will be applied only to the aggregate.

Increased use of value-based payments (Goal 3). Oregon committed to developing a value-based payment (VBP) roadmap for CCOs with targets for VBP payments by the end of the demonstration period. The plan would provide a broad definition of VBP and include a schedule to ensure phased-in implementation throughout the demonstration. (See Appendix D for details on the CCO VBP Roadmap published in September 2019.) The state will also introduce contracting protocols and technical assistance for CCOs that promote the use of VBPs. The VBP roadmap and adoption are not part of the formal 2017-2022 waiver evaluation. However, OHA will monitor progress in meeting VBP targets and report to CMS in regular quarterly and annual reports.

Continued expansion of the CCO model, including innovative strategies for ensuring better outcomes for dual-eligible members (Goal 4). During 2012-2017, more than half of beneficiaries who were dually eligible for Medicare and Medicaid voluntarily enrolled in a CCO. However, the choices and opportunities for this population were not always clear. The renewal aims to simplify coverage and choices for dual-eligible individuals through passive enrollment into CCOs, which began in 2019, with the option to opt-out of the CCO model and return to the state's FFS program at any point in time.

Figure 2.1: Goals of the 2017-2022 Waiver



Source: Centers for Medicare & Medicaid Services. (2017). *Special Terms and Conditions—Oregon Health Plan 21-W-00013/10 and 11-W-00160/10*. Appendix A – Medicaid Theory of Change.

Designing New CCO Contracts

Oregon's CCO model was initiated in 2012 and continued with the 2017-2022 waiver renewal. In 2017, Governor Brown directed the Oregon Health Policy Board (OHPB) to provide specific recommendations in four key areas to inform OHA's design and implementation of new five-year CCO contracts:⁶

1. Focus on social determinants and equity.
2. Increase value and pay for performance.
3. Improve the behavioral health system.
4. Maintain a sustainable cost growth.

Guided by these recommendations, in January 2018, OHA and the OHPB initiated a process to identify a new CCO contracting framework that would advance the state's goals. OHPB board members reviewed recommendations from the 2012-2017 waiver evaluation, "maturity assessments" in key policy areas for CCOs, and OHA's 2017-2019 Action Plan for Health. From February through August 2018, representatives from OHA and OHPB traveled the state, attended meetings, conducted presentations, and issued surveys, hearing from more than 2,500 experts, partners, and stakeholders. The state used this input to develop the next phase of health care transformation, CCO 2.0. Appendix D provides information on the key features of CCO 2.0 relating to SDOH, health equity, VBP, and behavioral health. Results for outcome measures presented in this report are based on data through 2019 (i.e., pre-CCO 2.0). The summative evaluation will assess how the implementation of CCO 2.0 impacted outcomes under the waiver renewal.

How to Read the Results

Overview

This chapter describes how to interpret the charts and tables in this report. We use results for measures relating to Hypothesis 1.1, *Coordination of care for CCO members with behavioral health diagnoses will improve*, as an example. Evaluation measures for this hypothesis are defined as follows:

- **Emergency Department (ED) Utilization per 1,000 Member Months (MM) for Members with Behavioral Health Conditions:** Number of ED visits per 1,000 member months among members with SPMI and/or SUD diagnoses.
- **Potentially Avoidable ED Visits per 1,000 MM for Members with Behavioral Health Conditions:** ED visits that were preventable or treatable with appropriate primary care per 1,000 member months among members with SPMI and/or SUD diagnoses.
- **Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications:** Percentage of members taking a 2nd generation antipsychotic medication who had a HbA1c test.
- **Lipid Testing for Members Using 2nd Gen. Antipsychotic Medications:** Percentage of members taking a 2nd generation antipsychotic medication who had a cholesterol test.
- **30-Day Follow-Up after Hospitalization for Mental Illness:** Percentage of discharges after hospitalization for mental illness where the patient received follow-up within 30 days.

Appendix A provides detailed specifications for all measures included in this report.

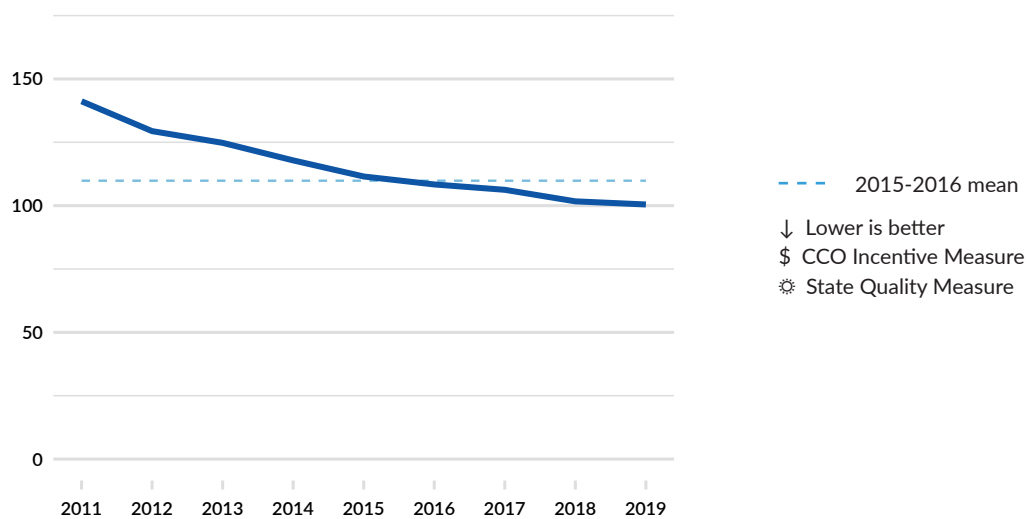
Line Graphs

We first display annual 2011-2019 unadjusted outcomes for each measure as a line graph. Symbols in the title provide additional information about the measure:

- “↓” indicates that a decrease in the measure represents an improvement.
- “\$” indicates that the measure was a CCO incentive measure at any time during the study period.
- “⚙” indicates that the measure was a state quality measure at any time during the study period.

Graphs feature a light blue dashed line showing the mean value for the measure in 2015-2016. We use mean performance in 2015-16 as a historical benchmark to capture Oregon’s performance prior to the waiver renewal in the two years following Medicaid expansion. This benchmark was defined in consultation with OHA. In the example below showing ED visits for members with behavioral health diagnoses, the dark blue line fell below the dashed line in 2016 and subsequent years, indicating that the state achieved its target for the measure in those years, as defined for purposes of this evaluation.

Figure 4.1: Utilization per 1,000 Member Months for Members with Behavioral Health Diagnoses (↓ \$ ⚙)



Adjusted Changes from Baseline

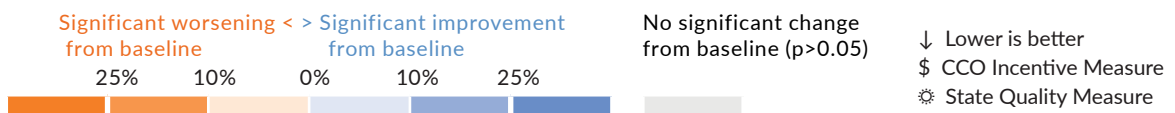
The “2016” and “2019” columns in the table below display unadjusted values for each measure in 2016 and 2019. The two righthand columns display the “adjusted” change in each measure from 2016 to 2019 and from 2011 to 2019, respectively. Adjusted changes show how much each measure changed from the baseline year (2016 or 2011) to 2019, controlling for the effect of members’ demographic characteristics and risk. Appendix B provides details on the pre-post statistical model used to obtain adjusted changes.

Shades of **blue** indicate that performance on a measure improved relative to the baseline year and that the change was statistically significant. Shades of **orange** indicate that a measure worsened significantly from baseline. For measures where “lower is better” (e.g., ED visits), statistically significant decreases are shown as improvements, and vice versa. Shading shows the magnitude of the change; for example, a dark blue shaded result indicates a statistically significant improvement of 25% or greater from baseline, whereas a light orange shaded result indicates the measure worsened by less than 10%. Gray indicates the change was not statistically significant at the 0.05 level of significance ($p > 0.05$).

Symbols (defined above) next to some measures provide additional information about those measures.

Table 4.1: Adjusted Change in Measures of Care Coordination for Members with Behavioral Health Conditions, 2011-2019 and 2016-2019

| Measure | | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|--|--------|-------|-------|-----------------------|-----------------------|
| ED Utilization per 1,000 MM Members with Behavioral Health Conditions | ↓ \$ ☀ | 108.4 | 100.5 | -10.6 | -22.4 |
| Potentially Avoidable ED Visits per 1,000 MM for members with Behavioral Health Conditions | ↓ ☀ | 15.2 | 12.2 | -3.8 | -13.5 |
| Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications | | 86.8% | 88.5% | 1.5 | 0.8 |
| Lipid Testing for Members 2nd Gen. Antipsychotic Medications | | 59.8% | 59.4% | -0.1 | -0.2 |
| 30-Day Follow-Up after Hospitalization for Mental Illness | \$ ☀ | 81.0% | 82.3% | 1.3 | 7.3 |



For example, potentially avoidable ED visits for members with behavioral health diagnoses decreased by 3.8 visits per 1,000 members between 2016 and 2019 (adjusted for members’ demographic characteristics and risk), representing an improvement of between 10% and 25%.

Subgroup Results

Subgroup tables show the direction of the change in each measure from 2016 to 2019 for specific subgroups of members. As in the first table, changes are adjusted for members' demographic characteristics and risk. These results are obtained by applying the pre-post statistical model (see Appendix B) separately for each subgroup. Symbols "+" and "-" denote an increase or decrease in the measure from 2016 to 2019. As in the first table, color coding shows whether the increase or decrease represented a statistically significant improvement or worsening, and the percentage magnitude of the change. Gray boxes indicate the change was not statistically significant. Boxes with "NA" (not shown in the example below) indicate no subgroup results were available due to lack of data or because the measure was already defined as being limited to that subpopulation.

Table 4.4: Adjusted Change from 2016 to 2019 in Measures of Care Coordination for Members with Behavioral Health Conditions, by Disability and Chronic Condition Status

| Measure | | Disability | | Chronic Condition | |
|--|--------|------------|----|-------------------|----|
| | | Yes | No | Yes | No |
| ED Utilization per 1,000 MM Members with Behavioral Health Conditions | ↓ \$ ☼ | - | - | - | - |
| Potentially Avoidable ED Visits per 1,000 MM Members with Behavioral Health Conditions | ↓ ☼ | - | - | - | - |
| Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications | | + | + | + | + |
| Lipid Testing for Members Using 2nd Gen. Antipsychotic Medications | | - | + | - | + |
| 30-Day Follow-Up After Hospitalization for Mental Illness | \$ ☼ | + | + | + | + |

Significant worsening < 10% from baseline
Significant improvement > 10% from baseline
No significant change from baseline (p>0.05)

25% 10% 0% 10% 25%

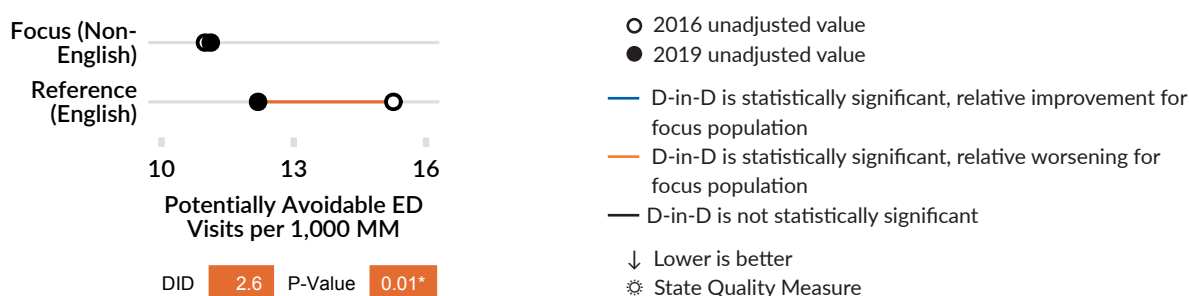
+ Increase
 - Decrease
 ↓ Lower is better
 \$ CCO Incentive Measure
 ☼ State Quality Measure

For example, ED utilization for members with behavioral health conditions decreased (improved) significantly regardless of members' disability status, although the decrease (improvement) was largest (between 10% and 25%) for members without a disability.

Focus Population Results

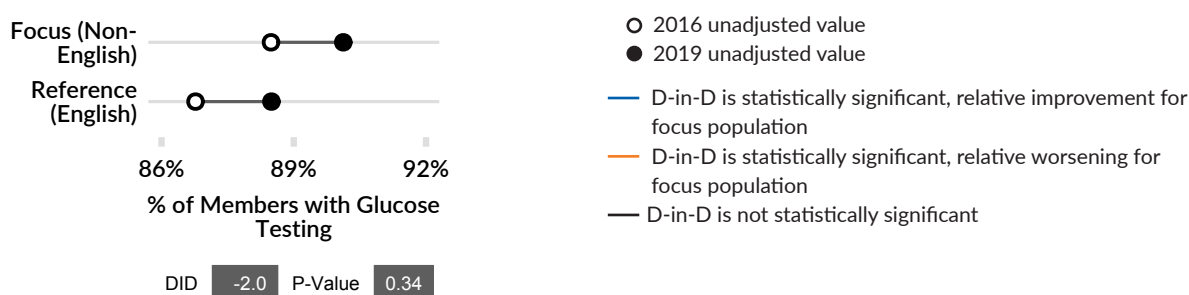
Results for focus population analyses are displayed as barbell plots. Each plot shows the (unadjusted) change in a given measure from 2016 to 2019 for the focus and reference populations. 2016 outcomes are shown as black circles, and 2019 outcomes as black dots. The color of the line connecting the 2016 and 2019 outcomes indicates whether the 2016-2019 change was significantly different for the focus population compared to the reference population, after adjusting for demographics and risk. Blue indicates that a measure *improved* in the focus population relative to the reference population, whereas orange indicates that the measure *worsened* in the focus population relative to the reference population. Gray indicates that the 2016-2019 change was not significantly different for the focus population compared to the reference population. Labels beneath each plot show the difference-in-differences (“DID”) coefficient estimate and its p-value. Appendix B provides details on the statistical model used to obtain these results.

Figure 4.7: Avoidable ED visits for members with behavioral health conditions increased for non-English speaking members relative to English speaking members (↓ ⚙)



In the above plot, the focus population saw a slight increase in avoidable ED visits from 2016 to 2019, whereas the reference population experienced a decrease. Lower is better for this measure. Therefore, focus population outcomes worsened relative to reference population outcomes.

Figure 4.8: The change in glucose testing for members using 2nd generation antipsychotic medications was not significantly different for non-English speaking members compared to English speaking members



Here, both the focus and reference populations saw an increase in glucose testing from 2016 to 2019. The change from 2016 to 2019 was not significantly different (i.e. it was roughly the same) for focus and reference populations after adjusting for demographics and risk. In other words, the performance of the focus population relative to the reference population did not change significantly over time.

Behavioral Health Integration

Overview

This chapter assesses Oregon's progress on integrating behavioral health as part of the CCO model during the first three years of the waiver renewal. We first describe the context for behavioral health integration and the history of Oregon's efforts in this area since the 2012 waiver. We then present results for evaluation measures related to quality, access, and spending on behavioral health based on data through 2019. Results include statistically adjusted changes over time, outcomes for subgroups of Medicaid members, and assessment of the focus population of non-English speaking members. Measures address the following evaluation hypotheses:

- 1.1 Coordination of care for CCO members with behavioral health diagnoses will improve.
- 1.2 Ability to identify and refer members to substance abuse interventions will improve over time.
- 1.3 Integration of behavioral health services will improve access for CCO members with serious mental illness (SMI).
- 1.4 Integration of behavioral health services with physical health services will be associated with reduced growth of total spending and spending in high-cost settings (e.g., ED and inpatient), and with sustained or increased spending on primary or preventive care, for CCO members with behavioral health diagnoses.

KEY FINDINGS

- Since 2012, the state and CCOs have been active in a variety of areas designed to advance behavioral health integration. However, there does not appear to be a clearly communicated set of priorities or milestones for gauging progress.
- A variety of measures moved in the desired direction between 2013 and 2016, including decreasing ED visits and avoidable ED visits, improvements in Glucose Testing for People Using Second Generation Antipsychotic Medications and Engagement in the Treatment of Alcohol and Drug Disorders, and increases in outpatient visits for individuals with behavioral health conditions.
- Some quality measures were essentially unchanged between 2013 and 2016, including Lipid Testing for People Using Second Generation Antipsychotic Medications, 30-Day Follow-Up after Hospitalization for Mental Illness, and Initiation in the Treatment of Alcohol and Drug Disorders, and measures of access to primary care.
- Expenditures per enrollee increased sharply between 2016 and 2019.
- The percentage of enrollees diagnosed with SUD increased from 3.4% in 2011 and to 8.3% 2019 – an increase of almost 150% in 8 years.

Behavioral Health Integration Efforts under the Waiver Renewal

Oregon made progress on behavioral health integration under the 2012-2017 waiver, as CCOs' global budgets and structure enabled them to act as a single point of accountability for members' health. (See Box 4.1 for details.) The 2012-2017 waiver evaluation noted this progress as well as the need for additional effort and time. The 2017-2022 waiver renewal called on Oregon to reinforce its commitment to integration of physical, behavioral, and oral health care through a performance-driven system aimed at improving health outcomes and restraining costs.

Box 4.1: Behavioral Health Integration and the 2012-2017 Waiver

States need ways to provide high quality, accessible, and cost-effective behavioral health services for their Medicaid members. The prevalence of behavioral health conditions is almost twice as high for individuals in Medicaid relative to the general population, and the prevalence of SMI is almost three times that of the general population (MACPAC, 2015). Nearly 12% of Medicaid enrollees over the age of 18 have an SUD (SAMHSA, 2013). Medicaid is a major source of financing for behavioral health services, paying for at least 25% of those services in the country in 2014 (Mark et al, 2016).

Behavioral health integration has become a focus for many states, including Oregon. Numerous research studies have demonstrated that integrating primary care and behavioral health care can improve patient outcomes (see for example, Miller et al, 2013). Models that focus on the integration of physical health care into the behavioral health care setting have demonstrated similar benefits (see for example, Druss et al, 2016).

During the 2012-2017 waiver, the CCO model was associated with an increased use of screening and brief intervention for alcohol and other drug (AOD) disorders. However, this did not translate to increased initiation of treatment, suggesting that providers may not have been prepared for the expanded clinical responsibilities of integrating SUD treatment or referral into their practice. It is also possible that increases seen in screening rates may have been due to changes in documentation rather than actual changes in care (Rieckmann et al, 2018). Efforts by CCOs and OHA also spurred increased co-location of behavioral health and primary care. Nonetheless, practices reported ongoing challenges in identifying funding mechanisms to support integration and a variety of examples of fragmented financing and delivery systems have persisted across the state (Kroening-Roche et al, 2017).

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Actions Specified in the Waiver Renewal

The 2017-2022 waiver specifically called on OHA and CCOs to undertake the following actions:

- Implement models of care that promote integration, including the Substance Abuse and Mental Health Services Administration's (SAMSHA) 2017-2019 CCBHC Demonstration project.
- Support Oregon's Behavioral Health Collaborative workgroups. The workgroups will concentrate in five areas: governance and financing; peer-delivered services; standards & competencies; workforce; and information technology.

CCBHCs were designed to provide a comprehensive range of behavioral health and SUD services, utilize a cost-based rate, collect standardized metrics and provide care coordination, particularly to individuals with serious behavioral health needs. In Oregon, CCBHCs were also responsible for providing 20 hours per week of on-site primary care, designed to support physical-behavioral health integration. Since 2019, this program continues to include 12 clinics at 21 sites throughout Oregon, serving approximately 50,000 individuals per year.

The Behavioral Health Collaborative recommended the state create a single point of shared accountability within each geographic service area. These Regional Behavioral Health Collaboratives were to be formed by CCOs, community mental health programs, local mental health authorities, local public health authorities, tribes, individuals with lived experience, and other key system partners in each geographic region of the state to improve individual health outcomes.

Progress leading up to 2020

In many ways, Oregon is well positioned to push forward on integration efforts. Oregon has made significant investments in its primary care system, which serves as a necessary point of coordination for most integration efforts. The PCPCH model – Oregon's version of the "primary care medical home" – was established in 2009 and has been a centerpiece of the CCO model. The state also participates in CMS's CPC+ model, a multi-payer approach that offers additional infrastructure support for integration efforts.

Integration is also supported by OHA's Transformation Center, launched in 2013 as part of the CCO initiative. The Transformation Center is the state's hub for innovation, quality improvement and learning for Oregon's health system. Its activities include, for example, technical assistance to connect CCOs with resources for advancing work on behavioral health integration.

The state has made advances in sharing information related to opioid use. Oregon has had widespread adoption of two web-based communications tools, the Emergency Department (ED) Information Exchange (EDIE) and PreManage. EDIE collects emergency department and inpatient Admit Discharge Transfer data from hospitals and pushes notifications back to the ED in real time. PreManage is a companion tool that offers the same notifications to those outside of the hospital system. Hospitals that have integrated EDIE into their electronic health record (EHR) may now include prescription drug monitoring program data in their EDIE alerts.

Oregon created a Behavioral Health Information Technology (HIT) Workgroup in 2018 to provide recommendations to OHA. The workgroup's recommendations have included the development of training and toolkits to address privacy and security rules governing health information exchange, guidance on adoption of EHRs, and the creation of behavioral health peer learning collaboratives.

In July 2018, OHA reorganized its behavioral health program, creating a position for state behavioral health director. This position was filled in April 2019 by Steve Allen, a national expert on behavioral health policy and state government reform, and experienced behavioral health administrator,

In 2019, the Governor created a Behavioral Health Advisory Council, which provided recommendations for the State's behavioral health system in 2020. The Council recommended multiple investments in behavioral health programs and services, including program changes that would be directly responsive to and driven by communities of color, tribal communities and people with lived experience, funding for continued operations and study of existing CCBHC demonstration sites, increased support for community restoration and an additional secure residential treatment facility, and the design of a statewide crisis system. The Council also recommended investments in the behavioral health workforce, including the creation of a behavioral health incentive fund, implementation and sustainability of culturally based practices, additional support for training of the behavioral health workforce, and a 309 rule revision to reduce provider administrative burden. Finally, the Council noted the importance of investments in housing and housing supports and provided a number of recommendations designed to increase the opportunities for safe and supportive places to live.

In 2020, Oregon voters passed Measure 110, the Drug Addiction Treatment and Recovery Act. The measure's goal was to shift the response to drug possession from criminalization to treatment and recovery. OHA was required to establish a treatment and recovery services fund to support new Addiction Recovery Centers (A.R.C.s), with fifteen A.R.C.s to be established throughout the state by October 1, 2021.

Areas of Concern

Despite the stated focus on behavioral health integration included in the waiver renewal, it was difficult to discern a clear strategy for this work based on publicly available policy documents and guidance. In contrast to communications and documentation around health-related services (see Chapter 5), OHA's messaging on behavioral health integration lacks clarity about how these efforts are being managed and coordinated with CCOs. As of this writing (March 2021), OHA's website on behavioral health integration does not appear to have been updated since 2017. The state and CCOs are active in a variety of areas, but there does not seem to be an articulated set of priorities or milestones for measuring progress.

Furthermore, although CCO 2.0 contracts in 2020 were designed to eliminate the subdelegation of behavioral health services and required CCOs to seamlessly integrate care so that members would be "unaware of any differences in how the benefits are managed," it is not clear if this level of full integration has occurred across all CCOs. For example, beneficiaries visiting the website of Portland's largest CCO (Health Share of Oregon) are directed to CareOregon for their behavioral health needs but are given the option of a variety of other "medical health plans" for their physical health needs.

A 2020 audit of the state's behavioral health system identified a variety of problems with the current behavioral health treatment system, including shortcomings in data and performance measurement, workforce shortages, fragmented care, and a lack of consistent governance.⁷ The audit singled out the state's behavioral health system for children as a system in crisis, failing to serve children, youth, and families who are involved with multiple systems with complex needs. The findings of this audit, coupled with the lack of clear information from the state on its strategy for behavioral health integration, suggests that considerable work is needed in this area.

Behavioral Health Outcomes

This section presents the results of our analyses of measures related to behavioral health integration. We present outcomes for CCO-enrolled, non-dual eligible Medicaid members for the period 2011 through 2019, including changes from 2011 and 2016 baselines adjusted for demographic characteristics and risk. We define “members with behavioral health conditions” based on diagnoses of SPMI or SUD; see Appendix B for details. We report results for subgroups based on age group, gender (binary classification), geography of residence (rural, urban, isolated), disability status (disabled, non-disabled), and the presence of chronic physical health conditions. We also assess outcomes for non-English speaking members, comparing changes in this focus population to English speaking members. We show results separately for each of the evaluation hypotheses relating to behavioral health integration. Appendix B provides details on statistical methods used for these analyses.

Coordination of Care for CCO Members with Behavioral Health Diagnoses (Hypothesis 1.1)

We assessed progress on care coordination for CCO members with behavioral health conditions based on the following five measures:

- **ED Utilization per 1,000 Member Months (MM) for Members with Behavioral Health Conditions:** Number of ED visits per 1,000 member months among members with SPMI and/or SUD diagnoses.
- **Potentially Avoidable ED Visits per 1,000 MM for Members with Behavioral Health Conditions:** ED visits that were preventable or treatable with appropriate primary care per 1,000 member months among members with SPMI and/or SUD diagnoses.
- **Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications:** Percentage of members taking a 2nd generation antipsychotic medication who had a HbA1c test.
- **Lipid Testing for Members Using 2nd Gen. Antipsychotic Medications:** Percentage of members taking a 2nd generation antipsychotic medication who had a cholesterol test.
- **30-Day Follow-Up after Hospitalization for Mental Illness:** Percentage of discharges after hospitalization for mental illness where the patient received follow-up within 30 days

Overall Trends

Figures 4.1-4.5 show outcomes for key measures of coordination for CCO members with behavioral health conditions from 2011 through 2019. Table 4.1 displays changes from 2011-2019 and from 2016-2019 after adjustment for demographics and risk. Several measures moved in the desired direction. For example, ED visits and potentially avoidable ED visits decreased over time, and 30-Day Follow-Up after Hospitalization for Mental Illness improved, although there were no statistically significant improvements between 2016 and 2019. Glucose Testing for People Using Second Generation Antipsychotic Medications demonstrated a modest improvement (1.5% between 2016 and 2019). The measure Lipid Testing for People Using Second Generation Antipsychotic Medications was relatively stable.

Table 4.1: Adjusted Change in Measures of Care Coordination for Members with Behavioral Health Conditions, 2011-2019 and 2016-2019

| Measure | | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|--|--------|-------|-------|-----------------------|-----------------------|
| ED Utilization per 1,000 MM Members with Behavioral Health Conditions | ↓ \$ ☼ | 108.4 | 100.5 | -10.6 | -22.4 |
| Potentially Avoidable ED Visits per 1,000 MM for members with Behavioral Health Conditions | ↓ ☼ | 15.2 | 12.2 | -3.8 | -13.5 |
| Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications | | 86.8% | 88.5% | 1.5 | 0.8 |
| Lipid Testing for Members 2nd Gen. Antipsychotic Medications | | 59.8% | 59.4% | -0.1 | -0.2 |
| 30-Day Follow-Up after Hospitalization for Mental Illness | \$ ☼ | 81.0% | 82.3% | 1.3 | 7.3 |

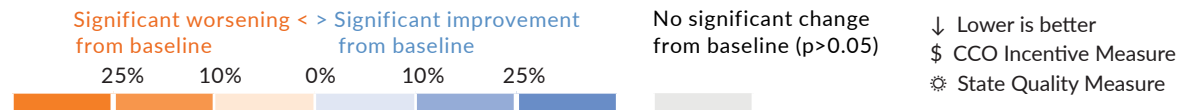
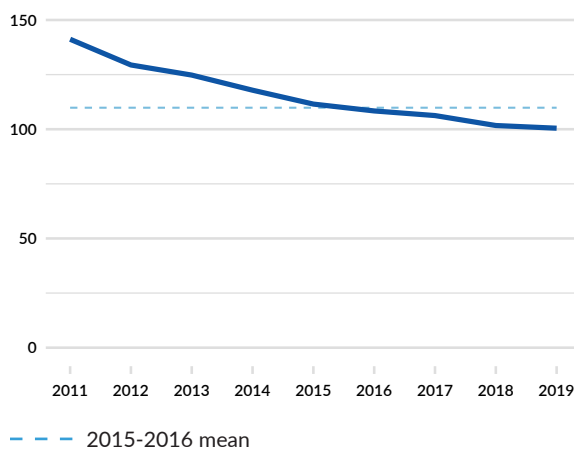


Figure 4.1: ED Utilization per 1,000 MM for Members with Behavioral Health Conditions (↓ \$ ☼)



↓ Lower is better
 \$ CCO Incentive Measure
 ☼ State Quality Measure

Figure 4.2: Potentially Avoidable ED Visits per 1,000 Members for Members with Behavioral Health Conditions (↓ ☼)

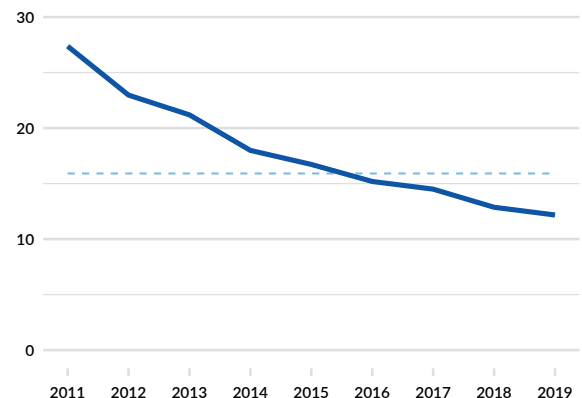


Figure 4.3: Glucose Testing for People Using Second Generation Antipsychotic Medications

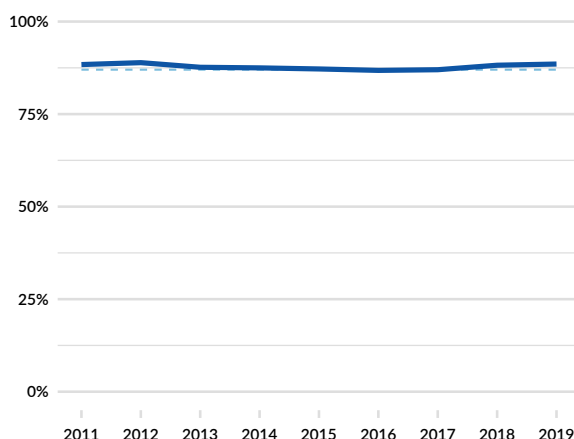


Figure 4.4: Lipid Testing for People Using Second Generation Antipsychotic Medications

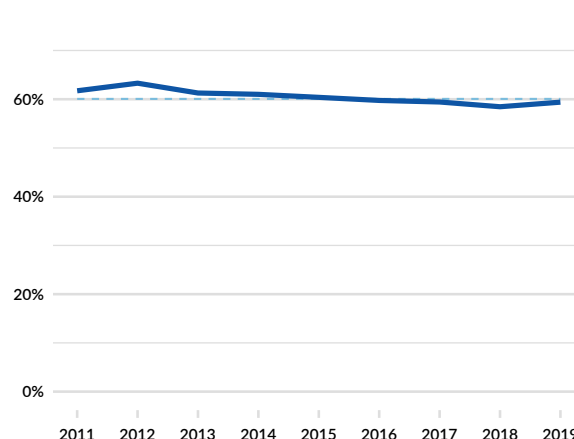
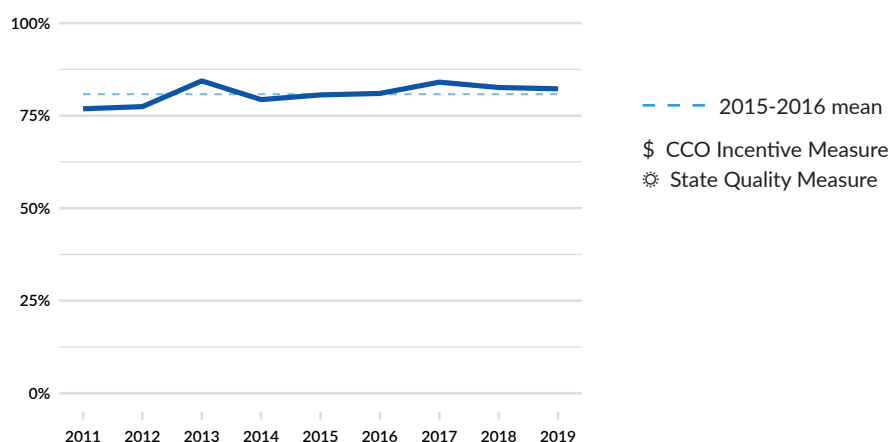


Figure 4.5: 30-Day Follow-Up after Hospitalization for Mental Illness (\$ ⚙)



Subgroup Analyses

Tables 4.2, 4.3 and 4.4 display changes among subgroups for key measures of care coordination between 2016 and 2019 (after adjustment for demographic characteristics and risk). ED visits declined, on average, for members with behavioral health conditions, but the largest decreases were among individuals aged 18-34 and among women – a pattern that also held in potentially avoidable ED visits. Glucose testing for individuals on second-generation antipsychotic medications improved slightly for all groups. We did not observe significant improvements for Lipid Testing in most groups, although the measure worsened slightly among rural enrollees and improved among those in isolated areas (defined as population centers of less than 2,500 without commuting flow to urban areas). Follow-Up after Hospitalization for Mental Illness was unchanged among most subgroups, but worsened for individuals ages 18 and under. Changes in these measures were relatively similar for individuals with and without a disability and for individuals with and without a physical health chronic condition. (Three of the measures below – avoidable ED visits, glucose testing, and lipid testing – are not defined for individuals under the age of 18. We do not report these measures for this subgroup).

Table 4.2: Adjusted Change from 2016 to 2019 in Measures of Care Coordination for Members with Behavioral Health Conditions, by Age & Gender

| Measure | | Age | | | Gender | |
|--|--------|-----|-------|-------|--------|--------|
| | | <18 | 18-34 | 35-64 | Male | Female |
| ED Utilization per 1,000 MM Members with Behavioral Health Conditions | ↓ \$ ☼ | - | - | - | - | - |
| Potentially Avoidable ED Visits per 1,000 MM for Members with Behavioral Health Conditions | ↓ ☼ | NA | - | - | - | - |
| Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications | | NA | + | + | + | + |
| Lipid Testing for Members Using 2nd Gen. Antipsychotic Medications | | NA | + | - | - | + |
| 30-Day Follow-Up after Hospitalization for Mental Illness | \$ ☼ | - | + | + | + | + |

Note: Enrollment data for gender was based on a binary classification.

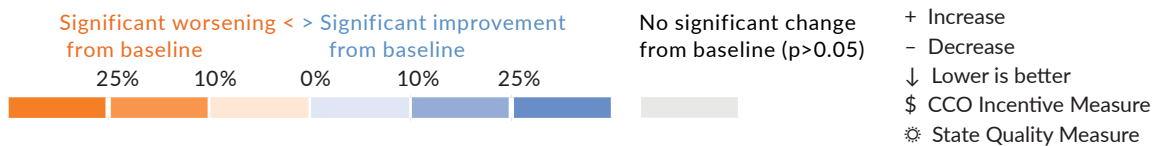


Table 4.3: Adjusted Change from 2016 to 2019 in Measures of Care Coordination for Members with Behavioral Health Conditions, by Geography of Residence.

| Measure | | Geography of Residence | | |
|--|--------|------------------------|-------|----------|
| | | Rural | Urban | Isolated |
| ED Utilization per 1,000 MM Members with Behavioral Health Conditions | ↓ \$ ☼ | - | - | - |
| Potentially Avoidable ED Visits per 1,000 MM Members with Behavioral Health Conditions | ↓ ☼ | - | - | - |
| Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications | | - | + | + |
| Lipid Testing for Members Using 2nd Gen. Antipsychotic Medications | | - | + | + |
| 30-Day Follow-Up After Hospitalization for Mental Illness | \$ ☼ | + | + | - |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas

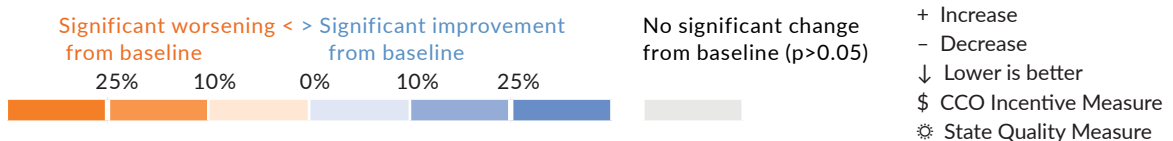


Table 4.4: Adjusted Change from 2016 to 2019 in Measures of Care Coordination for Members with Behavioral Health Conditions, by Disability and Chronic Condition Status

| Measure | | Disability | | Chronic Condition | |
|--|--------|------------|----|-------------------|----|
| | | Yes | No | Yes | No |
| ED Utilization per 1,000 MM Members with Behavioral Health Conditions | ↓ \$ ☼ | - | - | - | - |
| Potentially Avoidable ED Visits per 1,000 MM Members with Behavioral Health Conditions | ↓ ☼ | - | - | - | - |
| Glucose Testing for Members Using 2nd Gen. Antipsychotic Medications | | + | + | + | + |
| Lipid Testing for Members Using 2nd Gen. Antipsychotic Medications | | - | + | - | + |
| 30-Day Follow-Up After Hospitalization for Mental Illness | \$ ☼ | + | + | + | + |

Significant worsening < 25% from baseline
Significant improvement > 10% from baseline
No significant change from baseline (p>0.05)

25%
10%
0%
10%
25%
No significant change from baseline (p>0.05)

+ Increase
 - Decrease
 ↓ Lower is better
 \$ CCO Incentive Measure
 ☼ State Quality Measure

Focus Population — Non-English Speaking Members

Figures 4.6 through 4.10 compare changes in outcomes for non-English speaking individuals versus English speaking members. Non-English speaking members were identified in Medicaid enrollment data as members who indicated that the main language spoken in their household was not English. We used a difference-in-differences (“DID”) framework (described in detail in Appendix B) to determine whether and how the 2016-2019 change for the focus population was different from the change seen in the reference population, after adjusting for demographic characteristics and risk. Compared to English speaking members, ED visits increased among the non-English speaking members. Avoidable ED visits were relatively flat among the group of non-English speaking members, even as these visits declined among English speaking members. Although Lipid Testing was relatively unchanged among English speakers, this quality measure decreased among non-English speaking members. There were no significant differential trends among the other two quality measures (Glucose Testing and Follow-Up after Hospitalization for Mental Illness).

Figure 4.6: ED utilization for members with behavioral health conditions increased for non-English speaking members compared to English speaking members (↓ \$ ☼)

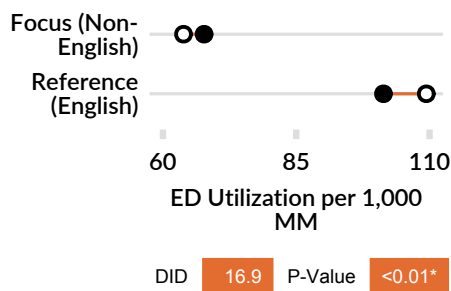


Figure 4.7: Avoidable ED visits for members with behavioral health conditions increased for Non-English speaking members relative to English speaking members (↓ ☼)

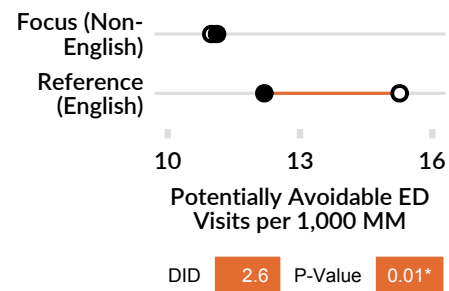


Figure 4.8: The change in glucose testing for members using 2nd generation antipsychotic medications was not significantly different for non-English speaking members compared to English speaking members

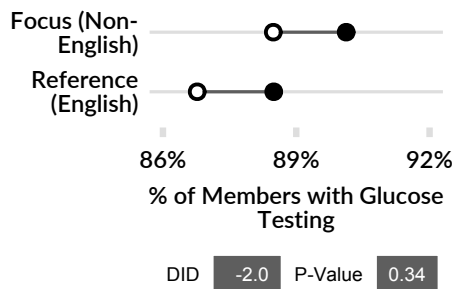
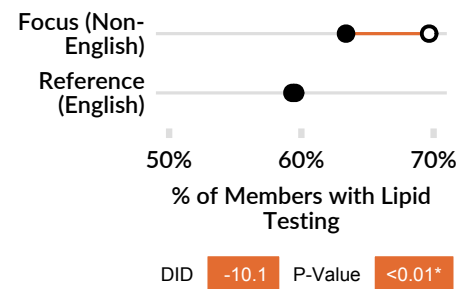


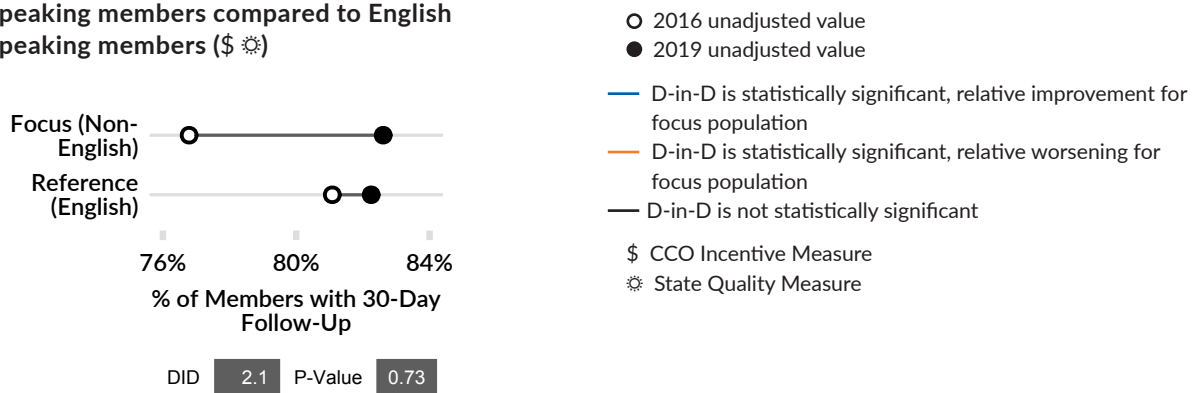
Figure 4.9: Lipid testing for members using 2nd generation antipsychotic medications decreased for non-English speaking members relative to English speaking members



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant
- ↓ Lower is better
- \$ CCO Incentive Measure
- ☼ State Quality Measure

Figure 4.10: The change in 30-day follow-up after hospitalization for mental illness was not significantly different for non-English speaking members compared to English speaking members (\$ ☼)



Note: “Non-English” includes members who indicated that English was not the main language spoken in their household.

Referral to SUD Treatment (Hypothesis 1.2)

To assess whether the ability to identify and refer members with substance use disorders improved in the first three years of the waiver renewal, we analyzed four measures:

- **Initiation of Alcohol and Other Drug (AOD) Dependence Treatment:** Percentage of members aged 13-64 diagnosed with alcohol or other drug dependence who started treatment within 14 days.
- **Engagement of AOD Dependence Treatment:** Percentage of members aged 13-64 diagnosed with alcohol or other drug dependence who received at least two services for alcohol or other drug abuse within 30 days of starting treatment.
- **Percentage of Members with SUD:** Percentage of members with two or more substance use disorder claims in a 2-year period.
- **Screening, Brief Intervention, and Referral to Treatment (SBIRT):** Measured as two rates; (1) percentage of members aged 12 and over who received an age-appropriate screening for alcohol or other substance abuse, (2) percentage of members who screened positive for alcohol or other substance abuse and received a brief intervention or referral to treatment.

We present results for the first of these three measures below. The collection of data SBIRT has changed over time, and we were therefore unable to analyze changes over time. Appendix G includes SBIRT outcomes for 2019.

Overall Trends

Figures 4.11-4.13 show outcomes for measures related to SUD diagnosis and treatment from 2011 through 2019. Table 4.5 displays changes from 2011 to 2019 and from 2016 to 2019 after adjustment for demographics and risk. Initiation of AOD Dependence Treatment decreased between 2011 and 2016 and was relatively flat between 2016 and 2019; Engagement of AOD Dependence Treatment followed a similar pattern.

Table 4.5: Adjusted Change in Measures of SUD Diagnosis and Treatment, 2011-2019 and 2016-2019

| Measure | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|---|-------|-------|-----------------------|-----------------------|
| Initiation of AOD Dependence Treatment, 13-64 years | 33.1% | 33.3% | 0.6 | -2.5 |
| Engagement of AOD Dependence Treatment, 13-64 years | 20.6% | 20.6% | 0.7 | -3.0 |
| Percentage of Members with SUD ↓ | 7.3% | 8.3% | 0.7 | 5.1 |

Significant worsening < 25% from baseline
 Significant improvement > 10% from baseline
 No significant change from baseline (p>0.05)
 ↓ Lower is better

As shown in Figure 4.11, Oregon has experienced a large and steady increase in the percentage of CCO members with SUDs, increasing from 3.4% in 2011 to 8.3% in 2019 (an increase of almost 150% in 8 years). These changes are in line with national and regional trends in opioid use and methamphetamine use. However, it is unclear how much of the change in this measure was driven by changes in the underlying prevalence of SUD versus increased screening and detection of SUD.

Figure 4.11: Percentage of Members with SUD (↓)

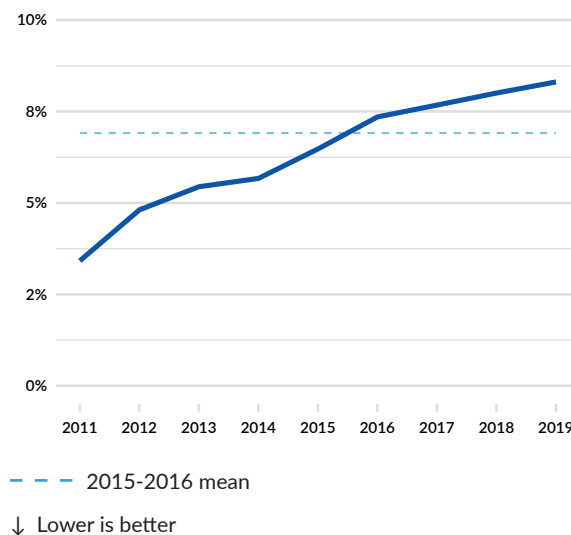


Figure 4.12: Initiation of Alcohol or Other Drug Dependence Treatment, 13-64 years

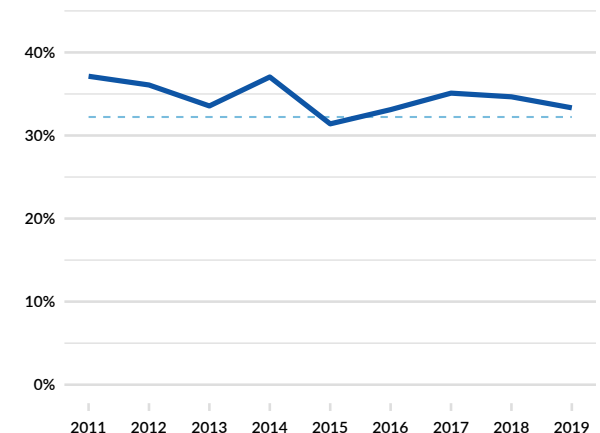
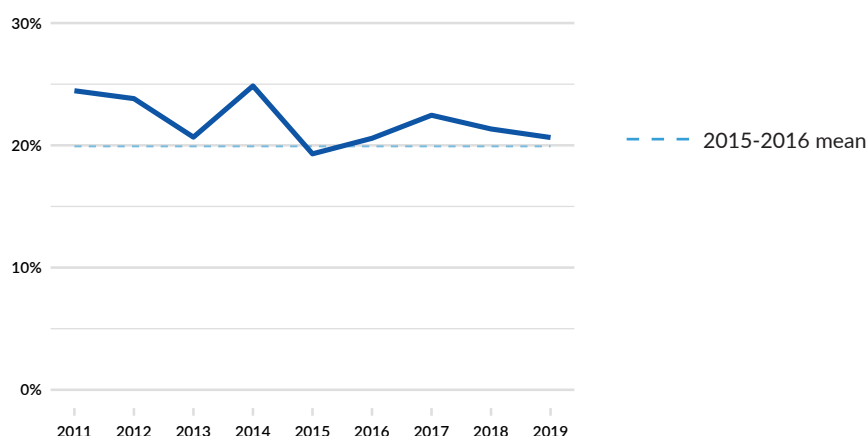


Figure 4.13: Engagement of Alcohol or Other Drug Dependence Treatment, 13-64 years



Subgroup Analyses

Tables 4.6, 4.7 and 4.8 display changes among subgroups for SUD measures between 2016 and 2019 after adjusting for changes in demographics and risk. Improvements in engagement and initiation of treatment were only significant among male members. The 2016-2019 change in the percentage of CCO members with SUDs was largest among males and individuals aged 35-64, larger in rural and isolated areas than in urban areas, and larger among individuals without a physical chronic condition or disability.

Table 4.6: Adjusted Change from 2016 to 2019 in Measures of SUD Diagnosis and Treatment, by Age & Gender

| Measure | Age | | | Gender | |
|---|-----|-------|-------|--------|--------|
| | <18 | 18-34 | 35-64 | Male | Female |
| Initiation of AOD Dependence Treatment, 13-64 years | - | + | + | + | - |
| Engagement of AOD Dependence Treatment, 13-64 years | - | + | + | + | + |
| Percentage of Members with SUD ↓ | - | - | + | + | + |

Note: Enrollment data for gender was based on a binary classification.

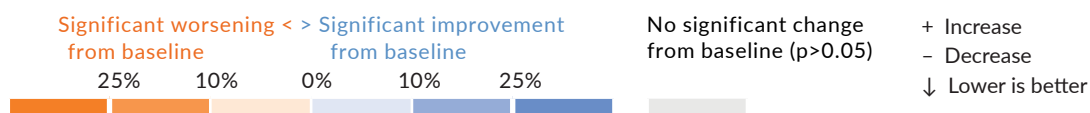


Table 4.7: Adjusted Change from 2016 to 2019 in Measures of SUD Diagnosis and Treatment, by Geography of Residence

| Measure | Geography of Residence | | |
|---|------------------------|-------|----------|
| | Rural | Urban | Isolated |
| Initiation of AOD Dependence Treatment, 13-64 years | + | + | - |
| Engagement of AOD Dependence Treatment, 13-64 years | + | + | - |
| Percentage of Members with SUD ↓ | + | + | + |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.

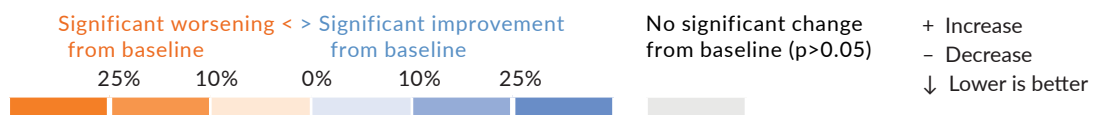
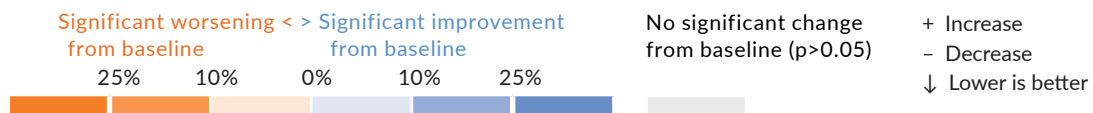


Table 4.8: Adjusted Change from 2016 to 2019 in Measures of SUD Diagnosis and Treatment, by Disability and Chronic Condition Status

| Measure | Disability | | Chronic Condition | |
|---|------------|----|-------------------|----|
| | Yes | No | Yes | No |
| Initiation of AOD Dependence Treatment, 13-64 years | - | + | + | - |
| Engagement of AOD Dependence Treatment, 13-64 years | - | + | + | - |
| Percentage of Members with SUD ↓ | - | + | + | + |



Focus Population — Non-English Speaking Members

Figures 4.14 through 4.16 compare changes in outcomes for non-English speaking versus English speaking individuals. Relative to English speaking enrollees, there was a significant increase in Initiation of AOD Dependence Treatment, but relatively little difference in Engagement of AOD Dependence Treatment. There was almost no change in the percentage of CCO members with SUDs among non-English speaking members, even as this percentage grew substantially among English speakers.

Figure 4.14: Initiation of AOD dependence treatment increased among non-English speaking members compared to English speaking members

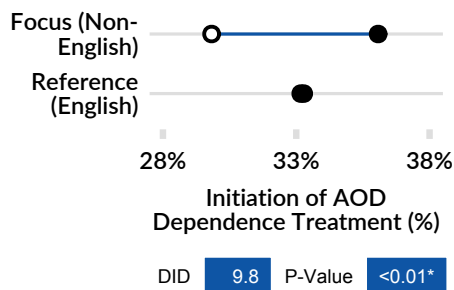


Figure 4.15: The change in engagement of AOD dependence treatment was not significantly different for non-English speaking members compared to English speaking members after adjusting for demographics and risk

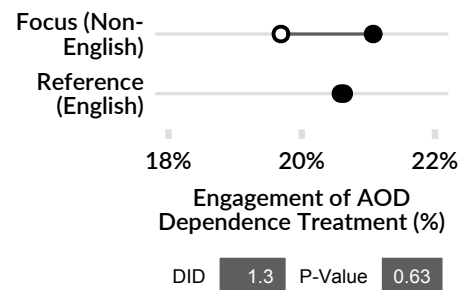
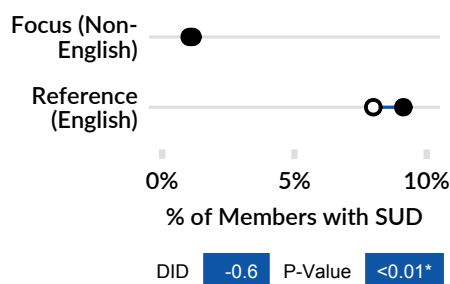


Figure 4.16: The percentage of members with SUD increased significantly more among English-speaking members compared to non-English speaking members (↓)



○ 2016 unadjusted value
 ● 2019 unadjusted value
 — D-in-D is statistically significant, relative improvement for focus population
 — D-in-D is statistically significant, relative worsening for focus population
 — D-in-D is not statistically significant
 ↓ Lower is better

Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

Access for CCO Members with Behavioral Health Conditions (Hypothesis 1.3)

The following evaluation measures were included in the analysis of access for CCO members with behavioral health conditions:

- **Outpatient Visits for Behavioral Health Care per 1,000 MM:** Number of outpatient visits for behavioral health care per 1,000 member months among members with SPMI and/or SUD diagnoses.
- **Outpatient Visits for Non-Behavioral Health Care per 1,000 MM:** Number of outpatient visits for non-behavioral health care per 1,000 member months among members with SPMI and/or SUD diagnoses.
- **Members with Any Primary Care for Members with Behavioral Health Conditions:** Percentage of members who had at least one visit to a primary care provider among members with SPMI and/or SUD diagnoses.

- **Adults' Access to Preventive-Ambulatory Services for Members with Behavioral Health**

Conditions: Percentage of adults (age 20 and over) who had an outpatient or preventive care visit among members with SPMI and/or SUD.

Overall Trends

Figures 4.17-4.20 show outcomes for key measures of access for CCO members with behavioral health conditions from 2011 through 2019. Table 4.9 displays adjusted changes for 2011-2019 and 2016-2019. Outpatient Visits for Behavioral Health Care increased steadily and substantially over the 2011-2019 time period, as did Outpatient Visits for Non-Behavioral Health Care. Two measures - Any Primary Care and Adults' Access to Preventive-Ambulatory Services - were relatively stable during this time period for members with behavioral health conditions..

Table 4.9: Adjusted Change in Measures of Access for CCO Members with Behavioral Health Conditions, 2011-2019 and 2016-2019

| Measure | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|--|--------|--------|-----------------------|-----------------------|
| Outpatient Visits for Behavioral Health Care per 1,000MM | 2315.8 | 2966.7 | 659.1 | 320.6 |
| Outpatient Visits for Non-Behavioral Health Care per 1,000MM | 1831.5 | 1974.4 | 208.5 | 798.1 |
| Members with Any Primary Care for Members with Behavioral Health Conditions | 90.8% | 91.2% | 0.1 | 0.5 |
| Adults' Access to Preventative-Ambulatory Services for Members with Behavioral Health Conditions | 91.4% | 91.4% | -0.1 | -0.2 |

Significant worsening < 25% from baseline
 Significant improvement > 25% from baseline
 No significant change from baseline (p>0.05)

Figure 4.17: Outpatient Visits for Behavioral Health Care per 1,000 MM

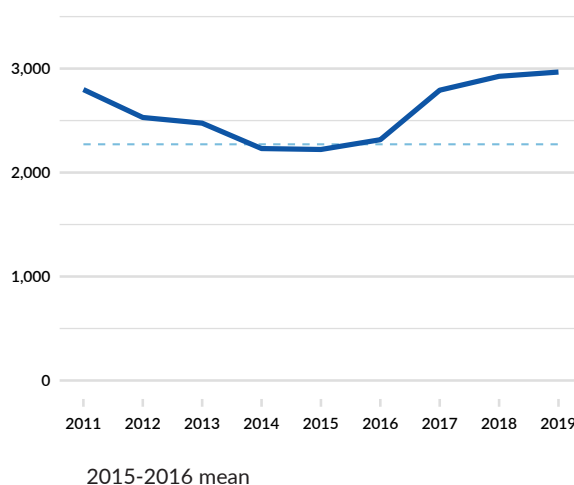


Figure 4.18: Outpatient Visits for Non-Behavioral Health Care for Members with Behavioral Health Conditions per 1,000 MM

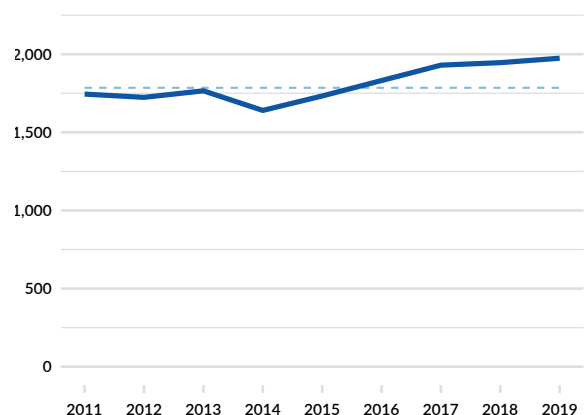


Figure 4.19: Members with Any Primary Care for Members with Behavioral Health Conditions

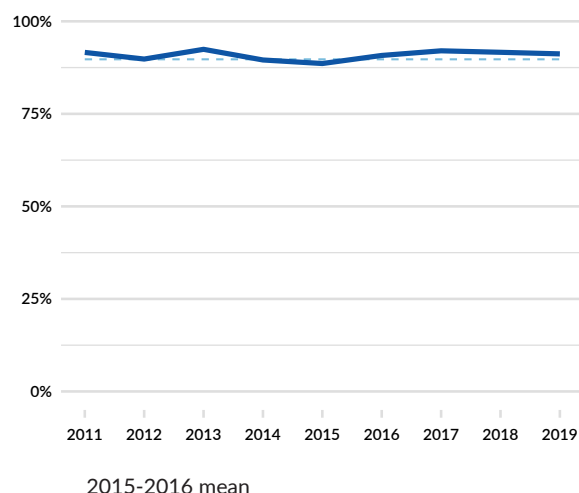
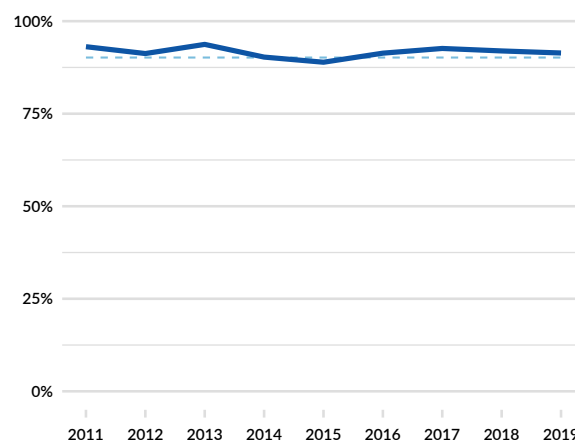


Figure 4.20: Adults' Access to Preventive-Ambulatory Services for Members with Behavioral Health Conditions



Subgroup Analyses

Tables 4.10, 4.11 and 4.12 display adjusted changes for access measures among subgroups of CCO members with behavioral health conditions between 2016 and 2019. There were significant increases in Outpatient Visits (Behavioral and Non-Behavioral) among all subgroups, with the largest changes occurring among individuals ages 35-64, enrollees with an urban residence, and disabled individuals. For the measure Any Primary Care, there was relatively little change among most subgroups, although individuals ages 35-64 exhibited a small but statistically significant decrease in this measure. A similar pattern occurred in Adults' Access to Preventive-Ambulatory Service.

Table 4.10: Adjusted Change from 2016 to 2019 in Measures of Access for CCO Members with Behavioral Health Conditions, by Age & Gender

| Measure | Age | | | Gender | |
|--|-----|-------|-------|--------|--------|
| | <18 | 18-34 | 35-64 | Male | Female |
| Outpatient Visits for Behavioral Health Care per 1,000 MM | - | + | + | + | + |
| Outpatient Visits for Non-Behavioral Health Care per 1,000 MM | + | + | + | + | + |
| Members with Any Primary Care for Members Behavioral Health Conditions | + | + | - | + | + |
| Adults' Access to Preventative-Ambulatory Services for Members with Behavioral Health Conditions | NA | + | - | - | - |

Note: Enrollment data for gender was based on a binary classification.

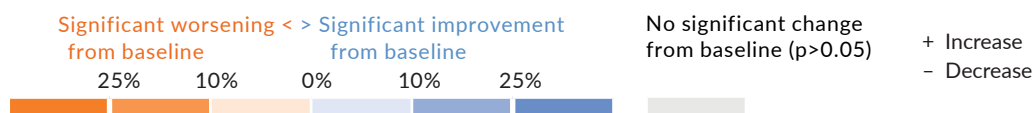


Table 4.11: Adjusted Change from 2016 to 2019 in Measures of Access for CCO Members with Behavioral Health Conditions, by Geography of Residence

| Measure | Geography of Residence | | |
|--|------------------------|-------|----------|
| | Rural | Urban | Isolated |
| Outpatient Visits for Behavioral Health Care per 1,000 MM | + | + | + |
| Outpatient Visits for Non-Behavioral Health Care per 1,000 MM | + | + | + |
| Members with Any Primary Care for Members Behavioral Health Conditions | - | + | + |
| Adults' Access to Preventative-Ambulatory Services for Members with Behavioral Health Conditions | - | + | + |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.

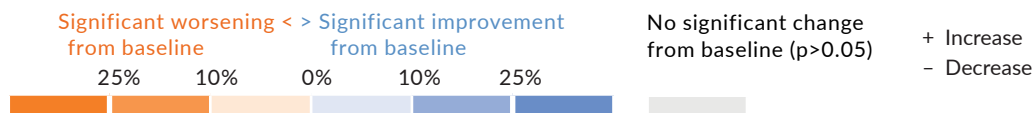
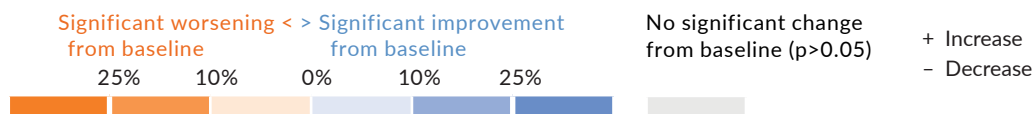


Table 4.12: Adjusted Change from 2016 to 2019 in Measures of Access for CCO Members with Behavioral Health Conditions, by Disability and Chronic Condition Status

| Measure | Disability | | Chronic Condition | |
|--|------------|----|-------------------|----|
| | Yes | No | Yes | No |
| Outpatient Visits for Behavioral Health Care per 1,000 MM | + | + | + | + |
| Outpatient Visits for Non-Behavioral Health Care per 1,000 MM | + | + | + | + |
| Members with Any Primary Care for Members Behavioral Health Conditions | + | + | + | + |
| Adults' Access to Preventative-Ambulatory Services for Members with Behavioral Health Conditions | + | - | - | + |



Focus Population — Non-English Speaking Members

Figures 4.21-4.24 compare changes in outcomes for individuals who are non-English speaking versus English speaking members. Relative to their English-speaking counterparts, non-English speaking members had significantly fewer outpatient visits and exhibited smaller increases over time (Behavioral and Non-Behavioral). There was relatively little difference in the measures of Any Primary Care and Adults' Access to Preventive-Ambulatory Services.

Figure 4.21: Outpatient visits for behavioral health care increased more for English speaking members compared to non-English speaking members between 2016 and 2019

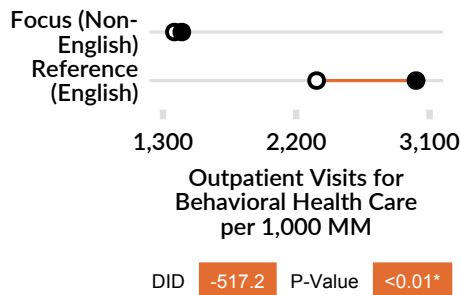


Figure 4.22: Outpatient visits for non-behavioral health care increased more for English speaking members compared to non-English speaking members between 2016 and 2019

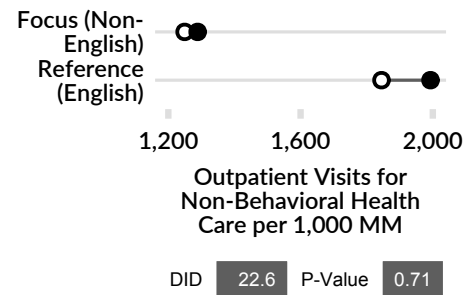


Figure 4.23: The change in primary care access for members with behavioral health conditions was not significantly different for non-English speaking versus English speaking members after adjusting for demographics and risk

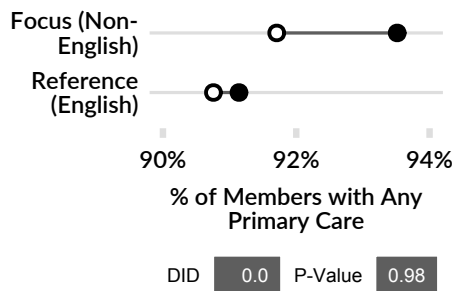
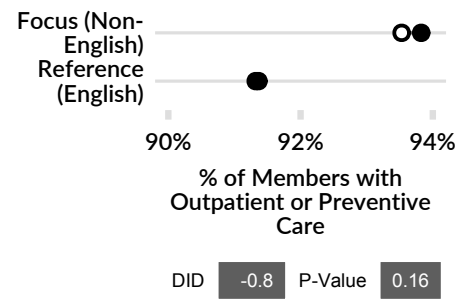


Figure 4.24: The change in access to preventive-ambulatory services for members with behavioral health conditions was not significantly different for non-English speaking members versus English speaking members after adjusting for demographics and risk



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Spending (Hypothesis 1.4)

To assess spending changes for members with behavioral health conditions, we used the following measures:

- **Primary Care Spending PMPM for Members with Behavioral Health Conditions:** Total spending on primary care services (excluding behavioral health services), divided by months of enrollment among members with SPMI and/or SUD diagnoses.
- **ED Spending PMPM for Members with Behavioral Health Conditions:** Total spending on ED services (excluding behavioral health services), divided by months of enrollment among members with SPMI and/or SUD diagnoses.
- **Inpatient Facility Spending PMPM for Members with Behavioral Health Conditions:** Total inpatient professional spending (excluding behavioral health services), divided by months of enrollment among members with SPMI and/or SUD diagnoses.
- **Inpatient Professional Spending PMPM for Members with Behavioral Health Conditions:** Total inpatient professional spending (excluding behavioral health services), divided by months of enrollment among members with SPMI and/or SUD diagnoses.
- **Total Spending PMPM for Members with Behavioral Health Conditions:** Total spending on emergency department, primary care, prescription drug, inpatient, behavioral health, and other outpatient spending divided by months of enrollment among members with SPMI and/or SUD diagnoses.

Overall Trends

Figures 4.25-4.29 show per member per month (PMPM) expenditure measures for CCO members with behavioral health conditions from 2011 through 2019. Table 4.13 displays changes from 2016 to 2019 and from 2011 to 2019 after adjusting for demographics and risk. Spending on primary care decreased between 2011 and 2016 and was relatively flat between 2016 and 2019. Spending on ED services also decreased substantially between 2011 and 2016 and then began to increase after 2016. Inpatient facility spending declined marginally from 2016 to 2019, although the change was not statistically significant. Inpatient professional spending continued a downward trend from 2016 to 2019. Total spending decreased from 2011 to 2014 and but then began an upward trajectory, increasing substantially since 2016.

In the tables below, blue shading denotes better performance and orange shading denotes worse performance. In the categories of spending, increases in primary care spending have been coded as improved performance (blue), whereas increases in spending in other categories have been coded as worse performance (orange). We note that these categorizations are subjective and there may be reasons to view increased spending on patients with behavioral health conditions as a positive improvement.

Table 4.13: Adjusted Change in Measures of PMPM Spending for Members with Behavioral Health Conditions, 2011-2019 and 2016-2019

| Measure | | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|--|---|----------|----------|--------------------------|--------------------------|
| Primary Care Spending PMPM for Members with Behavioral Health Conditions | | \$29.90 | \$30.27 | 0.07 | -11.19 |
| ED Spending PMPM for Members with Behavioral Health Conditions | ↓ | \$25.76 | \$28.82 | 3.52 | -8.88 |
| Inpatient Facility Spending PMPM for Members with Behavioral Health Conditions | ↓ | \$125.32 | \$122.09 | -1.81 | 2.44 |
| Inpatient Professional Spending PMPM for Members with Behavioral Health Conditions | ↓ | \$14.79 | \$13.44 | -1.26 | -4.28 |
| Total Spending PMPM for Members with Behavioral Health Conditions | ↓ | \$747.76 | \$814.82 | 75.75 | 45.30 |

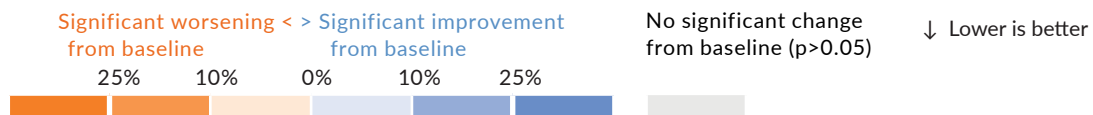
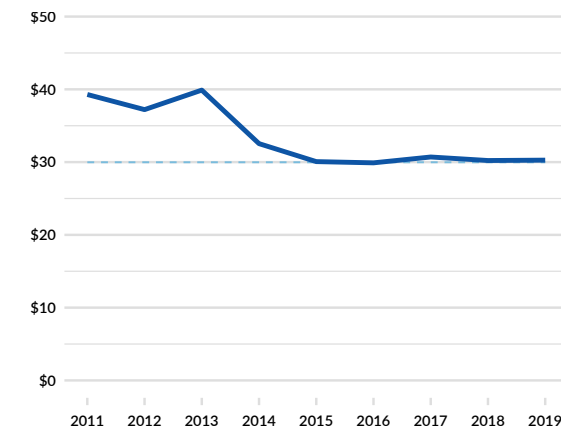


Figure 4.25: Primary Care Spending (\$) PMPM for Members with Behavioral Health Conditions



--- 2015-2016 mean

↓ Lower is better

Figure 4.26: ED Spending (\$) PMPM for Members with Behavioral Health Conditions (↓)

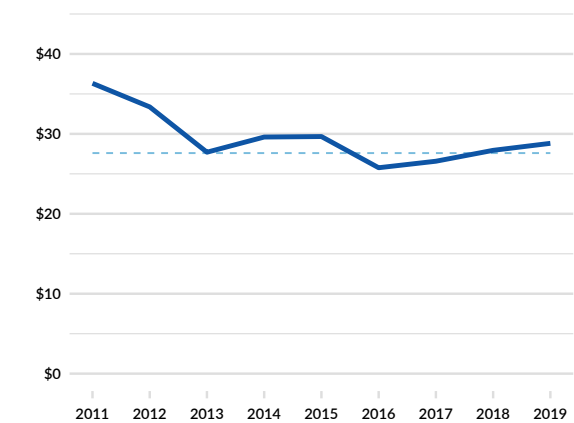


Figure 4.27: Inpatient Facility Spending (\$) PMPM for Members with Behavioral Health Conditions (↓)

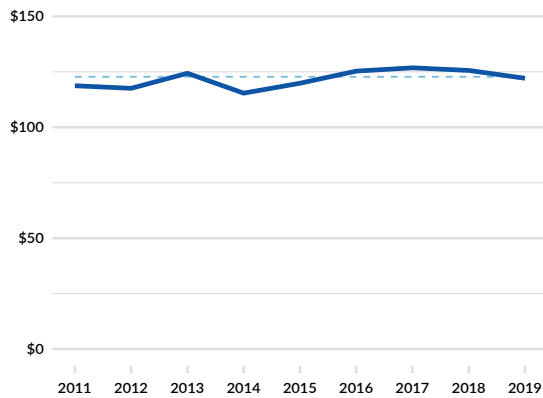


Figure 4.28: Inpatient Professional Spending (\$) PMPM for Members with Behavioral Health Conditions (↓)

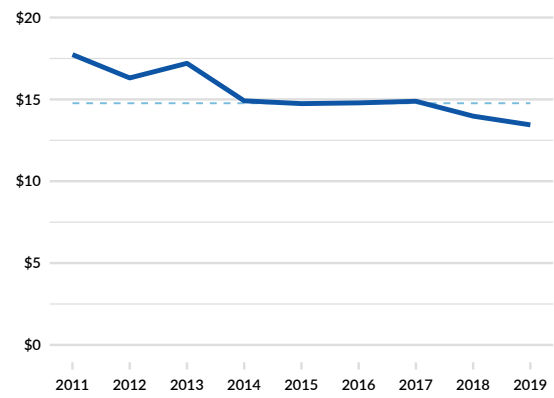
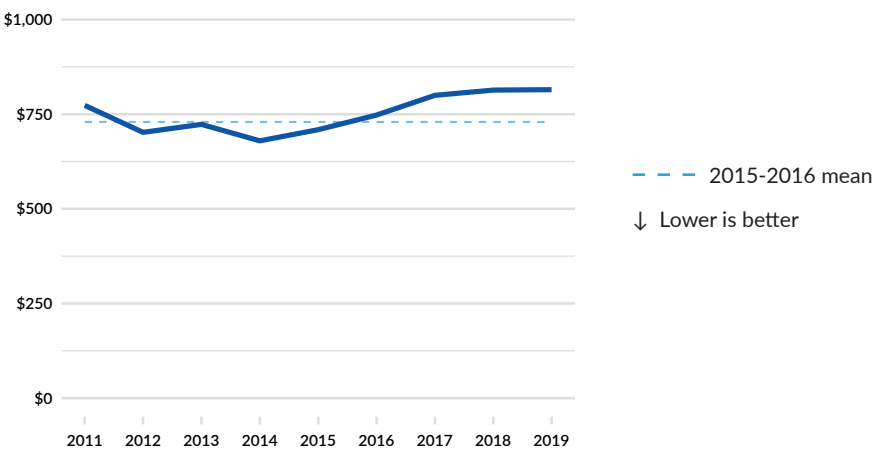


Figure 4.29: Total Spending (\$) PMPM for Members with Behavioral Health Conditions (↓)



Subgroup Analyses

Tables 4.14, 4.15 and 4.16 display spending changes among subgroups of CCO members with behavioral health conditions between 2016 and 2019, after adjustment for demographics and risk. In the area of primary care spending, the biggest increases were among individuals ages 18 and less, those living in rural areas, and the disabled population. Spending on ED services exhibited the largest increases among males, individuals aged 35-64, disabled individuals, and individuals living in urban areas. Inpatient spending (facility and professional) decreased most significantly among individuals ages 18-34 and among females. There were substantial differences among men and women in changes in total spending, with males responsible for larger increases. Spending increases were also concentrated among individuals aged 35-64.

Table 4.14: Adjusted Change from 2016 to 2019 in Measures of PMPM Spending for Members with Behavioral Health Conditions, by Age & Gender

| Measure | | Age | | | Gender | |
|--|---|-----|-------|-------|--------|--------|
| | | <18 | 18-34 | 35-64 | Male | Female |
| Primary Care Spending PMPM for Members with Behavioral Health Conditions | | + | + | - | - | + |
| ED Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | + | + | + | + |
| Inpatient Facility Spending PMPM for Members with Behavioral Health Conditions | ↓ | - | - | + | + | - |
| Inpatient Professional Spending PMPM for Members with Behavioral Health Conditions | ↓ | - | - | - | - | - |
| Total Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | + | + | + | + |

Note: Enrollment data for gender was based on a binary classification.

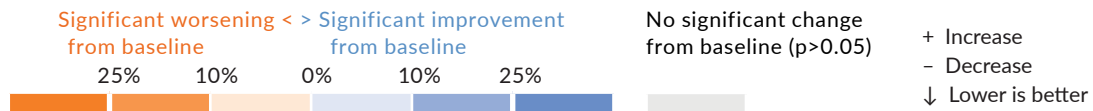


Table 4.15: Adjusted Change from 2016 to 2019 in Measures of PMPM Spending for Members with Behavioral Health Conditions, by Geography of Residence

| Measure | | Geography of Residence | | |
|--|---|------------------------|-------|----------|
| | | Rural | Urban | Isolated |
| Primary Care Spending PMPM for Members with Behavioral Health Conditions | | + | - | + |
| ED Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | + | + |
| Inpatient Facility Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | - | + |
| Inpatient Professional Spending PMPM for Members with Behavioral Health Conditions | ↓ | - | - | - |
| Total Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | + | + |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.

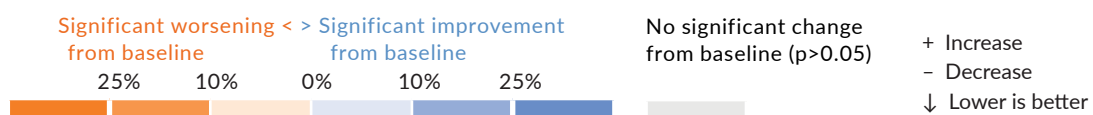


Table 4.16: Adjusted Change from 2016 to 2019 in Measures of PMPM Spending for Members with Behavioral Health Conditions, by Disability and Chronic Condition Status

| Measure | | Disability | | Chronic Condition | |
|--|---|------------|----|-------------------|----|
| | | Yes | No | Yes | No |
| Primary Care Spending PMPM for Members with Behavioral Health Conditions | | + | - | + | + |
| ED Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | + | + | + |
| Inpatient Facility Spending PMPM for Members with Behavioral Health Conditions | ↓ | - | - | - | - |
| Inpatient Professional Spending PMPM for Members with Behavioral Health Conditions | ↓ | - | - | - | - |
| Total Spending PMPM for Members with Behavioral Health Conditions | ↓ | + | + | + | + |

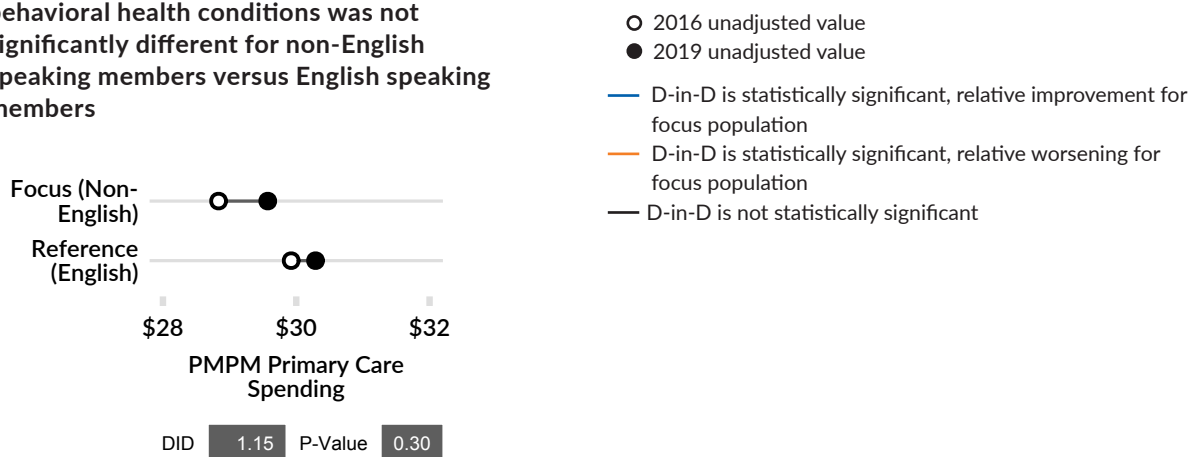
Significant worsening < 25% from baseline
 Significant improvement > 25% from baseline
 No significant change from baseline (p>0.05)

+ Increase
 - Decrease
 ↓ Lower is better

Focus Population — Non-English Speaking Members

Figures 4.30-4.34 compare changes in outcomes for non-English speaking versus English speaking members. Non-English speaking members exhibited trends similar to their English speaking counterparts in all categories.

Figure 4.30: The 2016-2019 change in primary care spending for members with behavioral health conditions was not significantly different for non-English speaking members versus English speaking members



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

Figure 4.31: The 2016-2019 change in ED spending for members with behavioral health conditions was not significantly different for non-English speaking members versus English speaking members

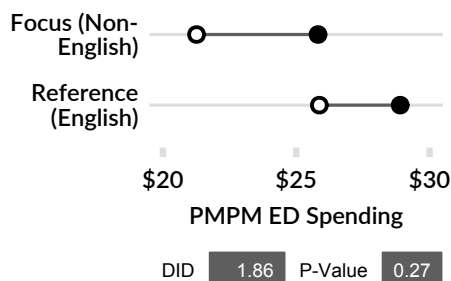


Figure 4.32: The 2016-2019 change in inpatient facility spending for members with behavioral health conditions was not significantly different for non-English speaking members versus English speaking members

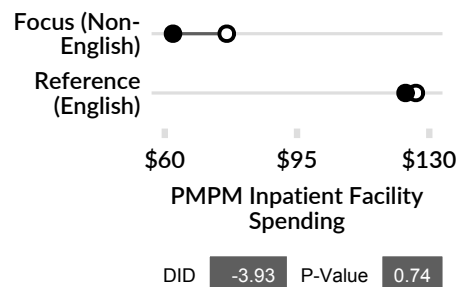


Figure 4.33: The 2016-2019 change in inpatient professional spending for members with behavioral health conditions was not significantly different for non-English speaking members versus English speaking members

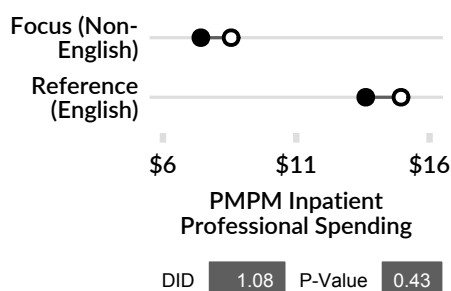
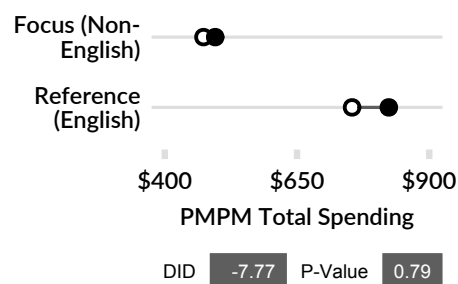


Figure 4.34: The 2016-2019 change in total spending for members with behavioral health conditions was not significantly different for non-English speaking members versus English speaking members



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Assessing the Impacts of CCO Closure

During the evaluation period, there was one significant change in the CCOs that affected coverage for the Oregon Medicaid population. FamilyCare, Inc., Oregon's second largest CCO serving members in Washington, Multnomah, Clackamas, and Marion counties, shut its doors on January 31, 2018. With FamilyCare's closure, the majority of its 113,000 enrollees transitioned into Health Share of Oregon. (A smaller number of FamilyCare members in Marion County transitioned into Willamette Valley Community Health, while those in the Gaston area of Washington County moved into Yamhill Community Care. FamilyCare members who were also members of a tribe were not transitioned into a new CCO. They remained in the FFS program but could choose to enroll in a CCO in their area.) OHA worked with CCOs in FamilyCare's service area to transition members while protecting access to and continuity of care.⁸

To assess the potential for this transition to create a disruption and affect our results, we conducted sensitivity analyses on the 2016-2019 adjusted change, testing for differences for people in the tri-county region (Clackamas, Multnomah and Washington counties). We found that for most measures, the 2016-2019 change was no different or modestly greater (indicating greater improvement) for enrollees in the tri-county area. One area to monitor is total spending, which increased slightly more for individuals in the tri-county area. This difference could reflect increased service use - possibly beneficial for these enrollees - or challenges in managing the costs associated with the transition. With this exception, we did not find evidence in the claims-based measures that outcomes had worsened for enrollees in the tri-county area following the departure of FamilyCare. Detailed results are provided in Appendix G.

Conclusions and Limitations

Oregon has been pursuing the integration of behavioral and physical health since the CCO model began in 2012. During the 2017-2020 time period, these efforts continued, and CCO 2.0 contracts included provisions designed to advance the goals of integration. However, areas of concern remain. In particular, in our review of publicly available policy documents and guidance, it was difficult to discern a clear strategy, vision, or milestones for achieving behavioral health integration.

Beginning in 2012, several performance measures began to move in the desired direction, with ED visits and avoidable ED visits decreasing among individuals with behavioral health conditions, while other outpatient visits increased, measures of primary care access remained relatively stable, and some measures of quality (e.g., 30-Day Follow-Up after Hospitalization for Mental Illness) improved. Expenditures per member also decreased between 2011 and 2016. However, beginning in 2016, some of this progress slowed or was reversed. We saw relatively little improvement in most measures, and expenditures per member increased substantially between 2016 and 2019. There was a steady increase in the percentage of members diagnosed with an SUD throughout the entire period.

The results presented here should be considered in the context of several limitations. First, the analysis is based on a "pre-post" design, comparing changes before and after the waiver renewal. With this approach, we cannot separate changes that could be attributed to Oregon's policies from secular changes - i.e., improvements occurring across the health system because of technology, provider supply and training, or other factors. Furthermore, analyses that rely on a short pre- or post-period could be biased if those years are outlier years and not representative of general trends. Second, our analyses are intended to provide a broad assessment of the effect of behavioral health integration. We did not evaluate the merits of specific evidence-based practices or approaches that

CCOs may have undertaken. Rather than measuring the success of specific tools or practices CCOs employed, these analyses should be seen as an assessment of the overall effects of integration efforts. Third, we did not conduct analyses that stratified by race or ethnicity, because we did not have reliable data. However, significant disparities exist in Oregon. Fourth, our results are based on data through 2019 and therefore do not capture any changes associated with CCO 2.0 contracts effective in 2020. The summative evaluation will assess the impact of CCO 2.0 on behavioral health integration. Finally, to calculate spending measures, we used imputed values for services subject to capitation arrangements (see Appendix B for details). Our results for these measures therefore are closer to a summary measure of utilization rather than actual CCO expenditures. Furthermore, changes in spending may reflect changes in benefits and covered services in addition to overall changes in utilization.

Oral Health Integration

Overview

This chapter assesses Oregon's progress on integrating oral health care services as part of the CCO model during the first three years of the waiver renewal. We first describe OHA and CCO activities in 2017-2019 to improve oral health integration and access to oral health services for Medicaid members. We then present results for evaluation measures related to quality, access, and spending on oral health, including regression-adjusted changes over time, results for subgroups of CCO-enrolled members, and comparison of focus and reference population outcomes. Measures address the following evaluation hypotheses:

- 2.1** Emergency dental visits for non-traumatic dental reasons will reduce over time for CCO enrollees.
- 2.2** Access to oral health services and dental care will improve for CCO enrollees.
- 2.3** Integration & coordination of oral health with other health services will improve for CCO enrollees.
- 2.4** Integration of oral health services with physical health services will be associated with reduced growth of spending on oral health services in high-cost settings (e.g., ED) and sustained or increased spending on preventive oral health services.

KEY FINDINGS

- Oregon has made broad progress on oral health quality and access measures since the waiver renewal.
- ED use for non-traumatic dental conditions continued a downward trajectory between 2016 and 2019.
- Access to dental services and utilization of dental procedures increased between 2016 and 2019 after declining through 2015, although the percentage of members with a regular dentist stayed relatively flat. Both focus populations (non-English speaking individuals and children) saw improvements in access and utilization of dental care compared to reference populations.
- Measures intended to capture progress on oral health integration also moved in the desired direction. Spending on dental services outside the ED increased, reflecting increases in payment rates implemented in 2018.

Oral Health Efforts under the Waiver Renewal

Integration of oral health services with physical health services is a key goal of Oregon's Medicaid delivery system transformation. Box 5.1 provides background on the state's progress on oral health integration under the 2012-2017 waiver. The 2017-2022 waiver specifically called on OHA and CCOs to implement recommendations from the December 2016 Oral Health Roadmap, including integrating oral health into PCPCH standards and practices and improving internal coordination on oral health within OHA.^{8,9} This section provides a brief overview of activities undertaken by OHA and CCOs in 2017-2019 to promote progress on oral health integration and access to oral health services. We describe initiatives for delivery system integration, addressing access barriers, and using outcomes metrics to gauge progress.

Box 5.1: Background on Oral Health Integration

"Oral health services" includes services provided under the supervision of a dentist as well as services by non-dentists, such as expanded practice dental hygienists, primary care providers and pediatricians. OHP offers comprehensive dental benefits for both CCO-enrolled and FFS members. Prior to Oregon's health system transformation, the majority of Medicaid members received dental services through OHA contracts with Dental Care Organizations (DCOs), which functioned as managed care organizations and dental provider organizations. In July 2014, funding for dental services was integrated into CCOs' global budgets. CCOs took over the management of dental benefits for their members, contracting directly with DCOs. OHA still contracts with DCOs to provide dental services to FFS members.

Following budget integration, CCOs began work on improving and integrating oral health services delivery at the local level. An evaluation using data through December 2015 found that access, utilization, and spending for dental services decreased moderately from July 2014, suggesting that delivery system integration of dental care required more time and resources, particularly in light of increased enrollment due to Medicaid expansion. As of mid-2016, OHA reported that eight CCOs had included specific oral health strategies in their transformation plans. CCOs also initiated a variety of pilot projects. These included initiatives to reduce ED use through early intervention dental care, integrate dental hygienists into primary care settings, and provide enhanced dental services to members with diabetes. A 2016 "environmental scan" of oral health integration concluded that Oregon's integration efforts were progressing but were still in their early stages. Ongoing challenges included the limited number of dentists accepting Medicaid patients, a lack of clear consensus on the definition of oral health integration, and differences in administrative requirements and processes between CCOs and DCOs.

References:

Oregon Health Authority. (2017). *Oral Health in Oregon's CCOs: A Metrics Report*. <https://www.oregon.gov/oha/HPA/ANALYTICS/Documents/oral-health-ccos.pdf>

Young, J., Kushner, J., & McConnell, K. (2016). *The Impact of Dental Integration in Oregon's Medicaid Program*. OHSU Center for Health Systems Effectiveness.

Health Management Associates. (2016). *Oral Health Integration in Oregon: Environmental Scan & Recommendations*. <https://www.oregon.gov/oha/HPA/dsi-tc/Resources/Oral%20Health%20Integration%20in%20Oregon%20-%20Environmental%20Scan%20and%20Recommendations.pdf>

Oral Health Integration

OHA recognizes that numerous barriers exist to achieving oral health integration at the delivery system level. These include the need for agreements between different providers, interprofessional medical-dental training, and electronic health system interoperability to enable bi-directional referrals.¹⁰ In 2018, two CCOs initiated oral health integration projects with assistance from OHA's Transformation Center. One project involved working with stakeholders to develop a work plan for oral health integration. The second project reviewed a pilot program integrating oral health care in the primary care setting.

In 2018, OHA also collaborated with the American Cancer Society to offer a dental track at the Oregon HPV Statewide Summit in May 2018. Areas of focus included ways for medical and dental professionals to work together to decrease oropharyngeal cancer rates by ensuring that clients received the human papillomavirus vaccine.¹¹

In 2019, OHA worked with staff at PCPCHs to develop standards for oral health integration.¹² PCPCH standard 3.F, released in February 2021, featured three levels of integration of oral health services: provision of screening/assessment for oral health needs (3.F.1), facilitating access to oral health services via relationships and agreements with dental providers (3.F.2), and offering dental care at the practice site (3.F.3).¹³

Addressing Barriers to Access

In 2016, Oregon's Medicaid Advisory Committee convened a workgroup tasked with developing a framework for improving oral health access in Medicaid.¹⁴ The workgroup highlighted a lack of member awareness of dental benefits as a barrier to accessing oral health services. Another major barrier was the shortage of OHP-enrolled oral health providers, particularly for FFS members and members residing in rural areas.

In response to the workgroup's recommendations, OHA developed a series of member and provider education materials to help raise awareness of dental benefits. OHA also disseminated an Oral Health Toolkit with resources for supporting oral health integration intended for CCOs, oral health providers, primary care providers, and health care transformation leaders.¹⁵

To encourage dental providers to enroll in OHP, OHA increased FFS rates by 10% for certain diagnostic and preventive services and 30% for specified surgical oral services as of January 2018. Effective January 2019, OHA launched a FFS dental incentive program to increase provider participation in treating FFS dental patients.¹⁶ The program, codified under OAR 410-123-1245, allowed oral health providers to earn incentive payments for providing preventive services to new Medicaid patients.¹⁷

Teledentistry services offers another opportunity to improve access to dental services in rural and isolated areas of the state. In 2019, OHA adopted new administrative rules (OAR 410-123-1265) which expanded Medicaid telehealth to include teledentistry services, allowing dental providers to reach underserved areas of the state.¹⁸

Oral Health Quality Metrics

OHA tracked dental sealants on permanent molars for children as part of the CCO incentive program from 2015 through 2019. As part of the 2019 measure set, OHA's Metrics & Scoring Committee introduced a new CCO incentive metric, "oral evaluation for adults with diabetes." Effective 2020, the committee adopted a measure of preventive dental care for children: preventive dental visits, ages 1-5 (kindergarten readiness) and 6-14.¹⁹

Oral Health Outcomes

This section presents performance relevant to assessing progress on oral health integration (evaluation question 2). Results include all CCO-enrolled, non-dual eligible Medicaid members, regardless of whether they were enrolled in dental benefits prior to the integration of dental services into CCO budgets in 2014. We present outcomes for the period 2011 through 2019, including changes from 2011 and 2016 baselines adjusted for demographic characteristics and risk. We report results for subgroups based on age group, gender, geography of residence (rural, urban, isolated), the presence of chronic physical health conditions, and disability status (disabled, non-disabled). Additionally, we compare changes from 2016 to 2019 for focus populations (children and non-English speaking members) to changes for reference populations (adults and English speaking members, respectively). We show results separately for each of the evaluation hypotheses. Appendices A and B provide measure specifications and details on statistical methods.

ED Use for Non-Traumatic Dental Visits (Hypothesis 2.1)

We assessed two measures of ED use for dental conditions; ED Visits for Traumatic Dental Conditions per 1,000 Members and ED Visits for Non-Traumatic Dental Conditions per 1,000 Members. These are calculated as counts (per 1,000 members) of the number of ED visits in a calendar year with specific discharge diagnosis codes (see Appendix A for the full list).

Overall Trends

Figures 5.1 and 5.2 show annual ED visits for traumatic and non-traumatic dental conditions for 2011 through 2019. Each figure includes a dotted blue line representing the mean value of the measure for 2015 and 2016. The "target" (for purposes of this evaluation) was met in years where ED utilization was at or below this line. Both ED visit types decreased considerably between 2011 and 2019, although the number of traumatic dental visits was mostly flat after the waiver renewal. For both measures, ED utilization during the first three years of the waiver renewal (2017-2019) remained below the 2015-2016 mean. The inclusion of overall ED utilization as a CCO incentive metric from 2013 to 2019 is likely to have contributed to these trends.

Figure 5.1: ED Visits for Traumatic Dental Conditions per 1,000 Members (↓)

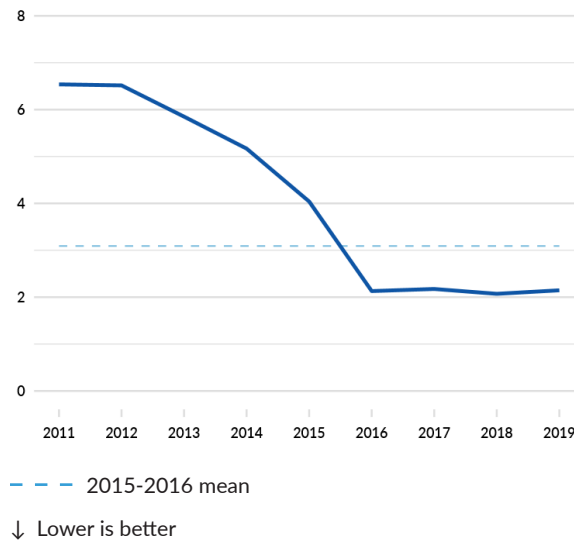


Figure 5.2 ED Visits for Non-Traumatic Dental Conditions per 1,000 Members (↓)

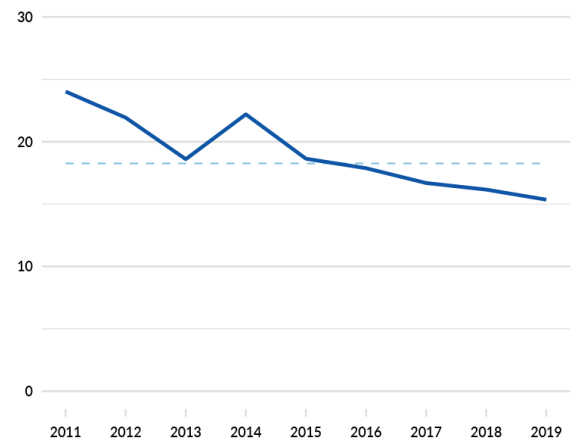


Table 5.1 displays adjusted changes in each measure, comparing 2019 to the baseline years of 2011 and 2016, respectively. Changes were adjusted to account for differences in members' demographics and risk over time using a pre-post statistical model (described in further detail in Appendix B). ED visits for traumatic dental conditions were unchanged from 2016 to 2019, with an overall decline of 4.5 visits per 1,000 members between 2011 and 2019. (Generally, this measure is likely to be an undercount, as patients with traumatic dental conditions typically suffer multiple injuries, and dental conditions are less frequently captured in ED claims than physical injuries.) ED visits for non-traumatic dental conditions declined significantly from 2016 to 2019.

Table 5.1. Adjusted Change in ED Use for Dental Conditions, 2011-2019 and 2016-2019

| Measure | | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|---|---|------|------|-----------------------|-----------------------|
| ED Visits for Traumatic Dental Conditions per 1,000 Members | ↓ | 2.1 | 2.1 | -0.2 | -4.5 |
| ED Visits for Non-Traumatic Dental Conditions per 1,000 Members | ↓ | 17.9 | 15.3 | -6.5 | -21.4 |

Significant worsening < from baseline
Significant improvement > from baseline
No significant change from baseline (p>0.05)
↓ Lower is better

25% 10% 0% 10% 25%

Subgroup Analyses

Tables 5.2, 5.3, and 5.4 show changes between 2016 and 2019 by subgroup, adjusted for changes in members' demographic characteristics and risk. ED visits for traumatic dental conditions decreased significantly for children. Declines in non-traumatic ED visits were seen across all subgroups, except for members residing in isolated areas (defined as population centers of less than 2,500 without commuting flow to urban areas).

Table 5.2: Adjusted Change from 2016 to 2019 in ED Use for Dental Conditions, by Age and Gender

| Measure | | Age | | | Gender | |
|---|---|-----|-------|-------|--------|--------|
| | | <18 | 18-34 | 35-64 | Male | Female |
| ED Visits for Traumatic Dental Conditions per 1,000 Members | ↓ | - | - | + | - | - |
| ED Visits for Non-Traumatic Dental Conditions per 1,000 Members | ↓ | - | - | - | - | - |

Note: Enrollment data for gender was based on a binary classification.

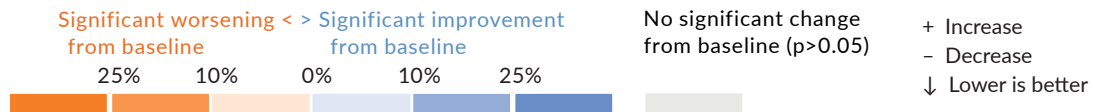


Table 5.3: Adjusted Change from 2016 to 2019 in ED Use for Dental Conditions, by Geography of Residence

| Measure | | Geography of Residence | | |
|---|---|------------------------|-------|----------|
| | | Rural | Urban | Isolated |
| ED Visits for Traumatic Dental Conditions per 1,000 Members | ↓ | - | - | - |
| ED Visits for Non-Traumatic Dental Conditions per 1,000 Members | ↓ | - | - | - |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.

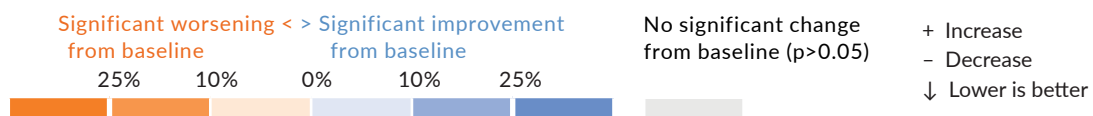
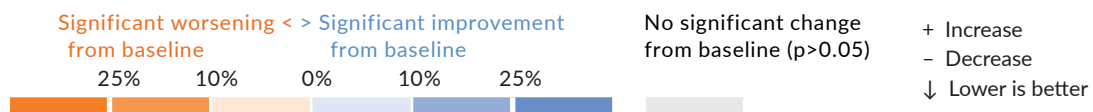


Table 5.4: Adjusted Change from 2016 to 2019 in ED Use for Dental Conditions, by Disability and Chronic Condition Status

| Measure | | Disability | | Chronic Condition | |
|---|---|------------|----|-------------------|----|
| | | Yes | No | Yes | No |
| ED Visits for Traumatic Dental Conditions per 1,000 Members | ↓ | - | - | - | - |
| ED Visits for Non-Traumatic Dental Conditions per 1,000 Members | ↓ | - | - | - | - |



Focus Population — Non-English Speaking Members

We examined how changes in outcomes from 2016 to 2019 differed for non-English speaking members compared to English speaking members using a difference-in-differences model (described in further detail in Appendix B). Non-English speaking members were identified in Medicaid enrollment data as members who indicated that the main language spoken in their household was not English. As shown in Figures 5.3 and 5.4, non-English speaking members had consistently lower rates of ED utilization for dental conditions than English speakers. However, the change in traumatic ED visits from 2016 to 2019 was not significantly different for non-English speaking members compared to English speakers. In contrast, the decline in ED visits for non-traumatic dental conditions was significantly larger among English speakers than non-English speaking members.

Figure 5.3: The change in traumatic dental ED visits from 2016 to 2019 was not significantly different for non-English speaking members compared to English speaking members (↓)

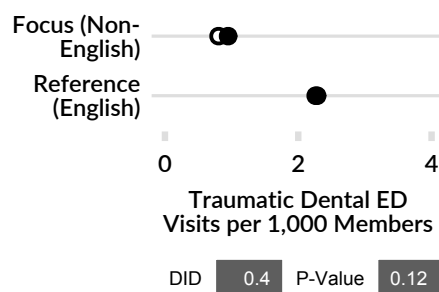
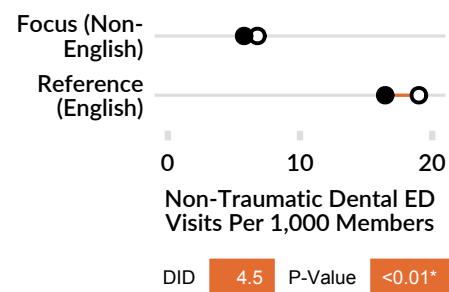


Figure 5.4: The decline in non-traumatic dental ED visits from 2016 to 2019 was significantly smaller for non-English speaking members compared to English speaking members (↓)



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant
- ↓ Lower is better

Focus Population — Children

Results from comparing changes among children versus adults are presented in Figures 5.5 and 5.6. Adjusted for demographics and risk, the difference-in-differences model indicated that ED visits for traumatic dental conditions decreased among children relative to adults. While children had substantially lower rates of non-traumatic ED visits compared to adults, this gap narrowed between 2016 and 2019, with adult utilization declining more than the decline in child utilization.

Figure 5.5: ED visits for traumatic dental conditions declined for children relative to adults (↓)

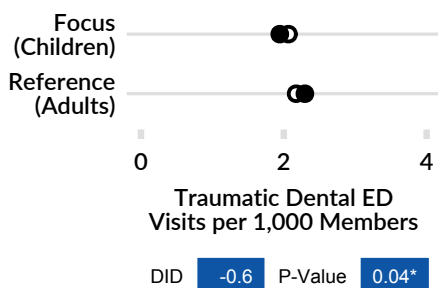
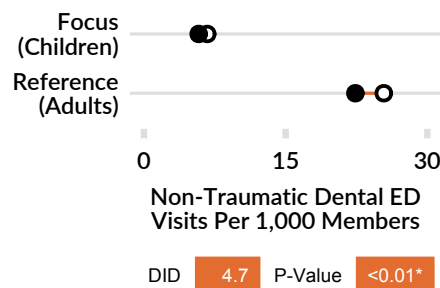


Figure 5.6: ED visits for non-traumatic dental conditions declined more for adults than children (↓)



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant
- ↓ Lower is better

Access to Oral Health Services (Hypothesis 2.2)

We evaluated access to oral health services based on the following measures:

- **Percentage of Members with at Least One Visit for Any Dental Procedure:** Percentage of members who had a visit for any dental procedure (including an ED visit for a traumatic or non-traumatic dental procedure) during the calendar year.
- **Percentage of Members with at Least One Visit for Core Dental Procedures:** Percentage of members who had a visit for any of 14 common dental procedures, including preventive and restorative dental services such as oral exams, x-rays, fillings, crowns and root canals, during the calendar year. (Appendix A lists procedure codes used to identify core dental procedures.)
- **Number of Visits for Any Dental Procedure per 1,000 Members:** Number of visits in a calendar year for any dental procedure, reported per 1,000 members.
- **Number of Visits for Core Dental Procedures per 1,000 Members:** Number of visits in a calendar year for core dental procedures, reported per 1,000 members.
- **Dental Sealants on Permanent Molars for Children:** Percentage of children aged 6-14 who received a sealant on a permanent molar during the calendar year.
- **Percentage of Members with a Regular Dentist:** Percentage of members who said they had a regular dentist they would go to for checkups, cleanings, or when they had a cavity or tooth pain.

Appendix A provides detailed specifications for these measures. The narrower definition of “core” dental services for some measures allows for an assessment of utilization and access changes disregarding the effect of any new services introduced over time, for example as a result of innovation or practice changes. Using a defined set of procedure codes thus provides an “apples-to-apples” comparison over time.

Overall Trends

Figures 5.7 through 5.10 show annual performance on oral health access measures in the years 2011 through 2019. The percentage of members with at least one visit for any dental procedure and core dental procedures declined between 2012 and 2015, climbing back up in 2016-2019. Visit counts for dental procedures showed the same general pattern. The percentage of children aged 6-14 receiving dental sealants on permanent molars declined in 2012-14 but began an upward trajectory in 2015 when the measure became a CCO incentive metric. The percentage of members with a regular dentist increased from 2015 to 2016 but declined thereafter, falling below the historical benchmark in 2019. (We did not have data on the percentage of members with a regular dentist prior to 2015.)

Table 5.5 displays adjusted changes for each measure from 2016 to 2019 and 2011 to 2019. Changes were adjusted to account for differences in members’ demographics and risk over time using a pre-post statistical model (described in further detail in Appendix B). The percentage of members with at least one visit for any dental procedure increased in both periods, with an adjusted increase of 2.2 percentage points between 2016 and 2019. The percentage of members accessing core dental services increased by a similar magnitude. The number of visits for dental procedures (and core dental procedures) also increased in both periods. The percentage of children aged 6-14 receiving dental sealants on permanent molars increased from 16.5% in 2016 to 20.4% in 2019, for an adjusted change of 3.2 percentage points in the first three years of the waiver renewal. The percentage of members with a regular dentist declined slightly from 2016 to 2019, although the change was not statistically significant.

Figure 5.7: Percentage of Members with at Least One Visit for Any Dental Procedure and Core Dental Procedures

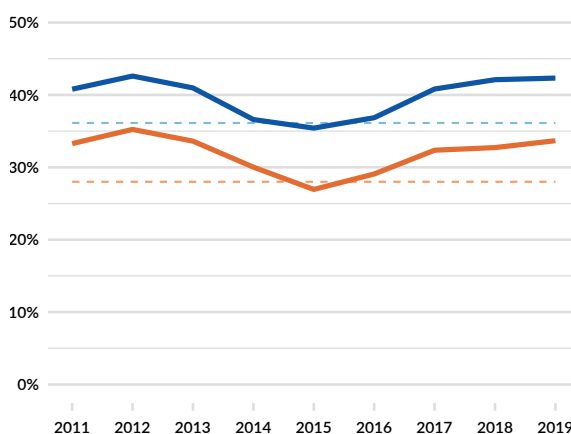
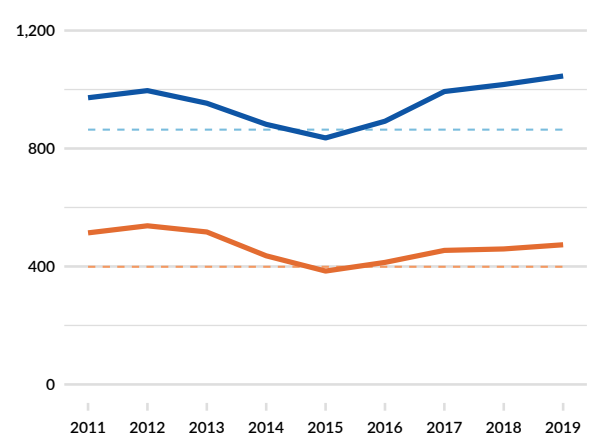
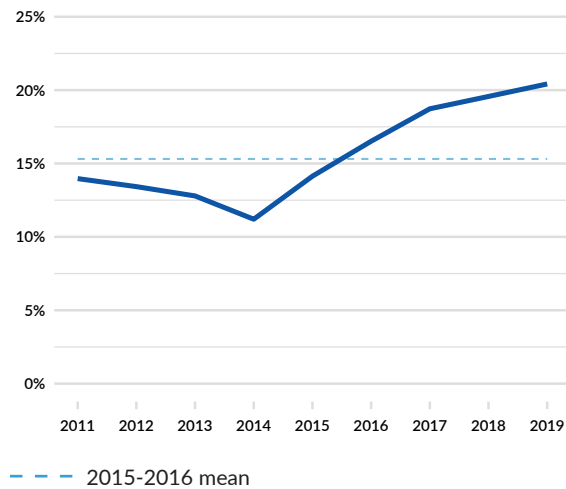


Figure 5.8: Number of Visits for Any Dental Procedure and Core Dental Procedures per 1,000 Members



— Any dental procedure - - - 2015-2016 mean
 — Core dental procedure - - - 2015-2016 mean (core procedures)

Figure 5.9: Dental Sealants on Permanent Molars for Children (\$ ☼)



\$ CCO Incentive Measure
☼ State Quality Measure

Figure 5.10: Percentage of Members with a Regular Dentist

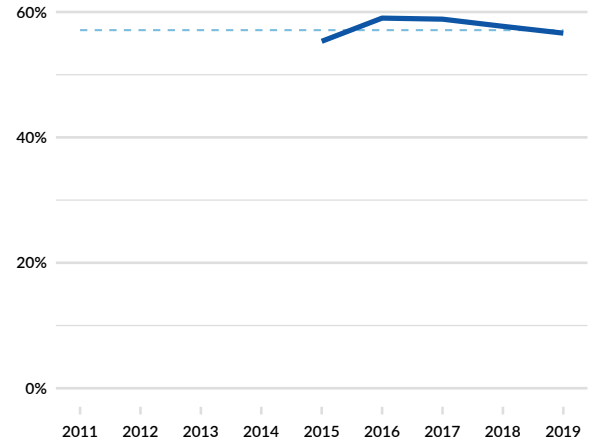


Table 5.5: Adjusted Change in Measures of Access to Oral Health Services, 2011-2019 and 2016-2019

| Measure | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|--|-------|--------|-----------------------|-----------------------|
| Percentage of Members with at Least One Visit for Any Dental Procedure | 36.9% | 42.3% | 2.2 | 6.8 |
| Percentage of Members with at Least One Visit for Core Dental Procedures | 29.1% | 33.7% | 2.4 | 7.8 |
| Number of Visits for Any Dental Procedure per 1,000 Members | 892.5 | 1045.9 | 75.8 | 199.1 |
| Number of Visits for Core Dental Procedures per 1,000 Members | 413.8 | 473.6 | 24.1 | 72.9 |
| Dental Sealants on Permanent Molars for Children \$ ☼ | 16.5% | 20.4% | 3.2 | 6.6 |
| Percentage of Members with a Regular Dentist | 59.0% | 56.6% | -1.8 | NA |

Significant worsening < 25% from baseline
 Significant improvement > 25% from baseline
 No significant change from baseline (p>0.05)

\$ CCO Incentive Measure
☼ State Quality Measure

Subgroup Analyses

Tables 5.6, 5.7, and 5.8 show changes in oral health access measures between 2016 and 2019 by subgroup, adjusted for demographics and risk. Access to dental services, number of visits per 1,000 members, and access to dental sealants increased across all subgroups, although improvements were less consistent for members with a disability. Declines in the percentage of members with a regular dentist were not statistically significant for any age- or gender-based subgroup. (We

did not have data to calculate adjusted changes in this measure for subgroups based on zip code designation, disability or chronic condition status.)

Table 5.6: Adjusted Change from 2016 to 2019 in Measures of Access to Oral Health Services, by Age and Gender

| Measure | Age | | | Gender | |
|--|-----|-------|-------|--------|--------|
| | <18 | 18-34 | 35-64 | Male | Female |
| Percentage of Members with at Least One Visit for Any Dental Procedure | + | + | + | + | + |
| Percentage of Members with at Least One Visit for Core Dental Procedures | + | + | + | + | + |
| Number of Visits for Any Dental Procedure per 1,000 Members | + | + | + | + | + |
| Number of Visits for Core Dental Procedures per 1,000 Members | + | + | + | + | + |
| Dental Sealants on Permanent Molars for Children \$ ⚙ | NA | NA | NA | + | + |
| Percentage of Members with a Regular Dentist | NA | - | - | - | - |

Note: Enrollment data for gender was based on a binary classification.

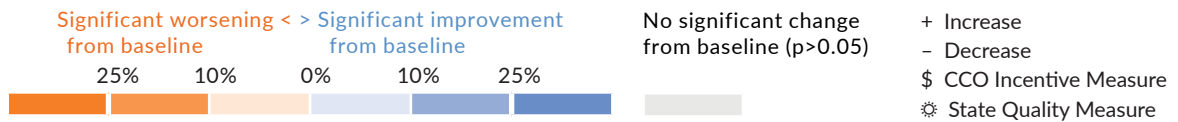


Table 5.7: Adjusted Change from 2016 to 2019 in Measures of Access to Oral Health Services, by Geography of Residence

| Measure | Geography of Residence | | |
|--|------------------------|-------|----------|
| | Rural | Urban | Isolated |
| Percentage of Members with at Least One Visit for Any Dental Procedure | + | + | + |
| Percentage of Members with at Least One Visit for Core Dental Procedures | + | + | + |
| Number of Visits for Any Dental Procedure per 1,000 Members | + | + | + |
| Number of Visits for Core Dental Procedures per 1,000 Members | + | + | + |
| Dental Sealants on Permanent Molars for Children \$ ☼ | + | + | + |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.

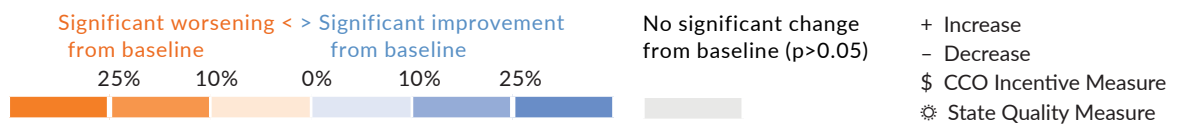
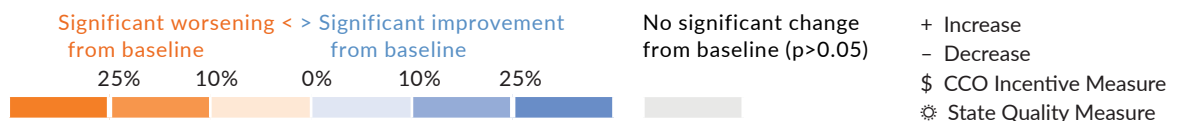


Table 5.8: Adjusted Change from 2016 to 2019 in Measures of Access to Oral Health Services, by Disability and Chronic Condition Status

| Measure | Disability | | Chronic Condition | |
|--|------------|----|-------------------|----|
| | Yes | No | Yes | No |
| Percentage of Members with at Least One Visit for Any Dental Procedure | + | + | + | + |
| Percentage of Members with at Least One Visit for Core Dental Procedures | + | + | + | + |
| Number of Visits for Any Dental Procedure per 1,000 Members | + | + | + | + |
| Number of Visits for Core Dental Procedures per 1,000 Members | + | + | + | + |
| Dental Sealants on Permanent Molars for Children \$ ☼ | + | + | + | + |



Focus Population — Non-English Speaking Members

Access to dental visits was higher among non-English speaking members than English speaking members, and this gap increased between 2016 and 2019 (see Figures 5.11 through 5.15). A similar pattern emerged for utilization (number of visits per 1,000) of any and core dental procedures and children's access to dental sealants. We did not have data to calculate outcomes for regular dentist access for the non-English speaking focus population.

Figure 5.11: The percentage of members accessing dental services increased more for Non-English speaking members than English speaking members

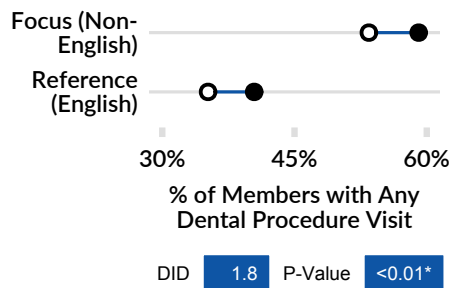


Figure 5.12: The percentage of members accessing core dental services increased more for Non-English speaking members than English speaking members

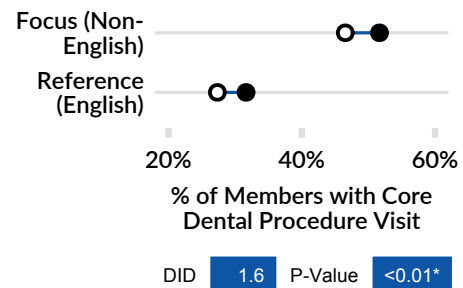
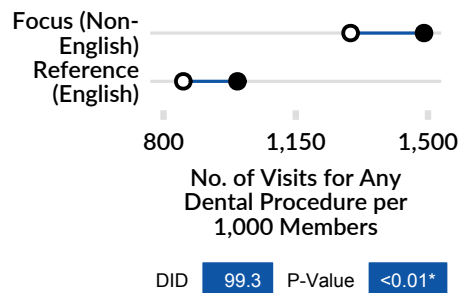


Figure 5.13: The number of visits for dental procedures increased more for Non-English speaking members than for English speaking members



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

Figure 5.14: The number of visits for core dental procedures increased more for Non-English speaking members than English speaking members

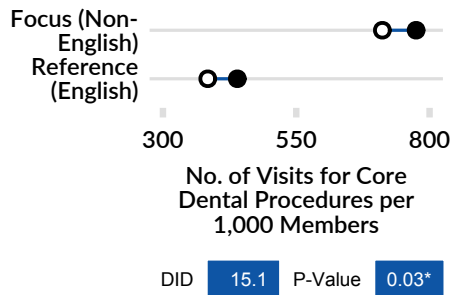
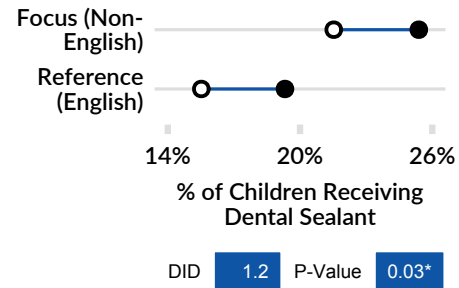


Figure 5.15: The percentage of children aged 6-14 who received a sealant on a permanent molar increased more for Non-English speaking members than English speaking members (\$ ☼)



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant
- \$ CCO Incentive Measure
- ☼ State Quality Measure

Focus Population — Children

Access to dental visits was greater among children than adults throughout the study period. For example, 55.4% of children had a least one dental procedure in 2019, compared to 32.7% of adults (see Figure 5.16). This gap widened between 2016 and 2019, with access rates increasing more for children compared to adults, adjusted for demographics and risk. Utilization of dental procedures followed a similar pattern. (We did not have data to calculate regular dentist access among persons under age 18.)

Figure 5.16: The percentage of members accessing dental services increased more for children than adults

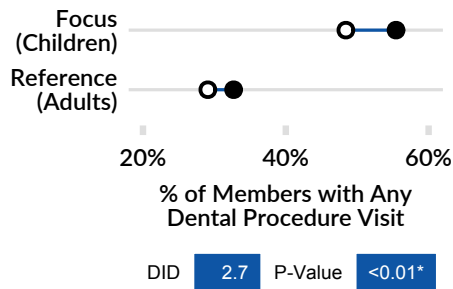


Figure 5.17: The percentage of members accessing core dental services increased more for children than adults

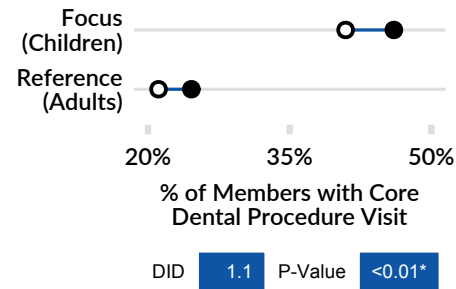


Figure 5.18: The number of visits for dental procedures increased more among children than adults

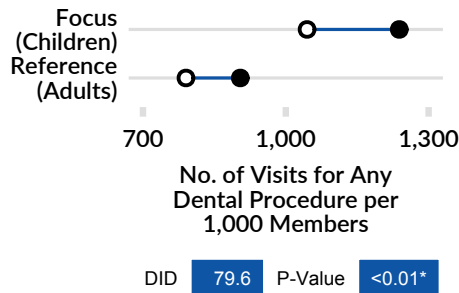
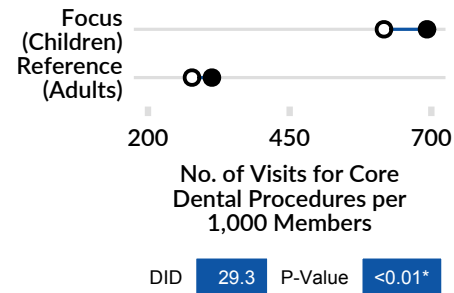


Figure 5.19: The number of visits for core dental procedures increased more among children than adults



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Integration of Oral Health with Other Health Services (Hypothesis 2.3 and 2.4)

We assessed progress on integration of oral health with other health services using the following metrics:

- **Assessments within 60 Days for Children in ODHS Custody:** Percentage of members aged 0-17 in custody of the Oregon Department of Human Services (ODHS) who received required physical, mental, and dental assessments.
- **Percentage of Members with at Least One Visit for Any Dental Procedure for Members with a Chronic Condition:** Percentage of members with a chronic physical health condition who had a visit for any dental procedure (including an ED visit for a traumatic or non-traumatic dental procedure).

- **Percentage of Members with at Least One Visit for Core Dental Procedures for Members with a Chronic Condition:** Percentage of members with a chronic physical health condition who had a visit for any of 14 common dental procedures. (See Appendix A for procedure codes used to identify core dental procedures).
- **Spending on ED Visits for Dental Conditions PMPM:** Total spending on ED visits for either traumatic or non-traumatic dental conditions, divided by months of enrollment.
- **Spending on Dental Services Excluding ED Visits for Dental Conditions PMPM:** Total spending on dental services (excluding ED visits for traumatic or non-traumatic dental conditions), divided by months of enrollment.

Appendix A provides detailed specifications for these measures.

Overall Trends

Assessments for children in ODHS custody increased between 2016 and 2019, as shown in Figure 5.20. The percentage of members with a chronic physical health condition accessing dental services decreased from 2012 to 2015 but improved gradually from 2016 onwards (see Figure 5.21), similar to trends across the CCO-enrolled population as a whole. PMPM spending on ED visits for dental conditions (Figure 5.22) dropped between 2011 and 2016, increasing slightly in 2017-2019. Spending on dental services excluding ED visits declined between 2016 and 2018, increasing sharply in 2019 (Figure 5.23).

Table 5.9 displays adjusted changes in oral health integration measures from 2016 to 2019 and 2011 to 2019. Changes were adjusted to account for differences in members' demographics and risk over time using a pre-post statistical model (described in further detail in Appendix B). The percentage of children in ODHS custody receiving a mental, physical, and oral health assessment within 60 days increased by 13.3 percentage points between 2016 and 2019, adjusted for demographics and risk. Access to oral health services for members with chronic physical health conditions increased from 2016 to 2019. The percentage of members with at least one dental visit increased from 41.8% to 44.8%, an adjusted change of 2.2 percentage points. Between 2011 and 2019, the measure increased by 6.8 percentage points, adjusting for demographics and risk. Core dental services access for members with a chronic condition showed similar trends. ED spending for dental conditions declined slightly from 2016 to 2019, whereas spending declined by \$1.28 PMPM from 2011 to 2019. Spending on dental services excluding ED visits increased by \$2.89 PMPM between 2016 and 2019. (Blue shading in the Table characterizes both the decline in ED spending and the increase in other spending as an "improvement.")

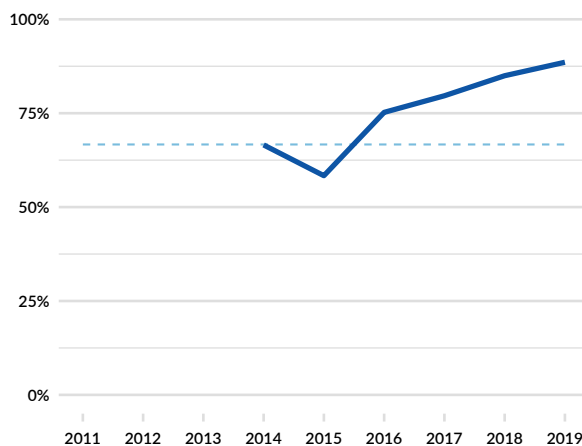
Table 5.9: Adjusted Change in Measures of Integration of Oral Health with Other Health Services, 2011-2019 and 2016-2019

| Measure | | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|---|------|--------|---------|-----------------------|-----------------------|
| Assessments within 60 Days for Children in ODHS Custody | \$ ⚙ | 75.2% | 88.6% | 13.3 | NA |
| Percentage of Members with at Least one Visit for Any Dental Procedure for Members with a Chronic Condition | | 41.8% | 44.8% | 2.2 | 6.8 |
| Percentage of Members with at Least one Visit for Core Dental Procedures for Members with a Chronic Condition | | 32.1% | 35.1% | 2.4 | 7.8 |
| Spending on ED Visits for Dental Conditions PMPM | ↓ | \$0.66 | \$0.70 | -0.04 | -1.28 |
| Spending on Dental Services Excluding ED Visits for Dental Conditions PMPM | | \$7.37 | \$10.63 | 2.89 | 3.28 |

Significant worsening < > Significant improvement from baseline
 25% 10% 0% 10% 25%

No significant change from baseline (p>0.05)
 ↓ Lower is better
 \$ CCO Incentive Measure
 ⚙ State Quality Measure

Figure 5.20: Assessments within 60 Days for Children in ODHS Custody (\$ ⚙)



— Any dental procedure
 — Core dental procedure
 — 2015-2016 mean
 — 2015-2016 mean (core procedures)

\$ CCO Incentive Measure
 ⚙ State Quality Measure

Figure 5.21: Percentage of Members with at Least One Visit for Any Dental Procedure and Core Dental Procedures for Members with a Chronic Condition

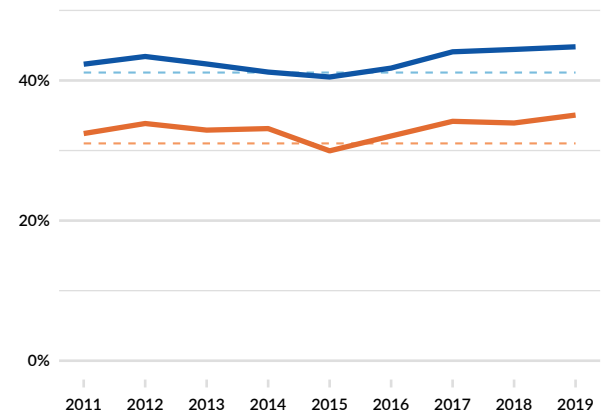


Figure 5.22: Spending (\$) PMPM on ED Visits for Dental Conditions (\$)

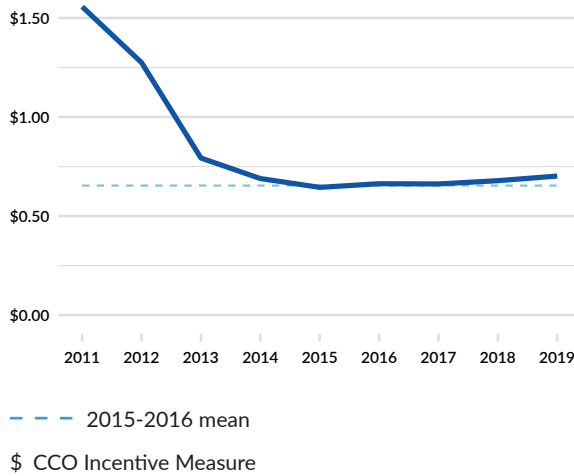
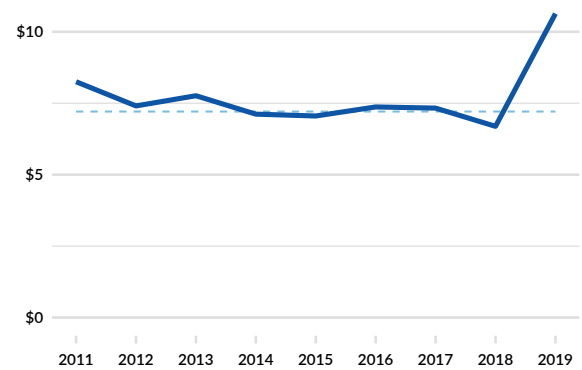


Figure 5.23: Spending (\$) PMPM on Dental Services Excluding ED Visits for Dental Conditions



Subgroup Analyses

Tables 5.10, 5.11 and 5.12 present subgroup-level changes from 2016-2019 for oral health integration measures, adjusted for demographics and risk. The percentage of members with chronic conditions accessing dental procedures increased across all subgroups, except for members with a disability, for whom the change in access to any dental procedure was not statistically significant. Spending on ED visits for dental conditions decreased significantly among young adults, urban residents, non-disabled members, and persons with a chronic condition, while increasing for persons with no chronic physical health conditions. Spending on dental services excluding ED visits increased across all subgroups. We did not have data to calculate subgroup outcomes for the ODHS assessment measure.

Table 5.10: Adjusted Change from 2016 to 2019 in Measures of Integration of Oral Health with Other Health Services, by Age and Gender

| Measure | Age | | | Gender | |
|---|-----|-------|-------|--------|--------|
| | <18 | 18-34 | 35-64 | Male | Female |
| Percentage of Members with at Least One Visit for Any Dental Procedure for Members with a Chronic Condition | + | + | + | + | + |
| Percentage of Members with at Least One Visit for Core Dental Procedures for Members with a Chronic Condition | + | + | + | + | + |
| Spending on ED Visits for Dental Conditions PMPM | - | - | - | - | - |
| Spending on Dental Services Excluding ED Visits for Dental Conditions PMPM | + | + | + | + | + |

Note: Enrollment data for gender was based on a binary classification.

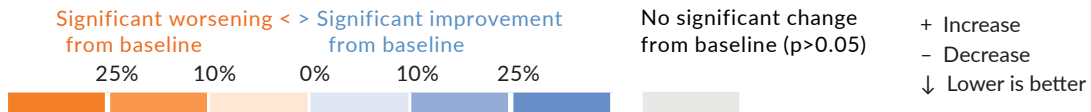


Table 5.11: Adjusted Change from 2016 to 2019 in Measures of Integration of Oral Health with Other Health Services, by Geography of Residence

| Measure | Geography of Residence | | |
|---|------------------------|-------|----------|
| | Rural | Urban | Isolated |
| Percentage of Members with at Least One Visit for Any Dental Procedure for Members with a Chronic Condition | + | + | + |
| Percentage of Members with at Least One Visit for Core Dental Procedures for Members with a Chronic Condition | + | + | + |
| Spending on ED Visits for Dental Conditions PMPM | + | - | + |
| Spending on Dental Services Excluding ED Visits for Dental Conditions PMPM | + | + | + |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.

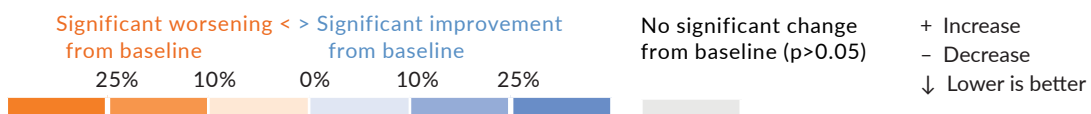


Table 5.12: Adjusted Change from 2016 to 2019 in Measures of Integration of Oral Health with Other Health Services, by Disability and Chronic Condition Status

| Measure | Disability | | Chronic Condition | |
|---|------------|----|-------------------|----|
| | Yes | No | Yes | No |
| Percentage of Members with at Least One Visit for Any Dental Procedure for Members with a Chronic Condition | + | + | NA | NA |
| Percentage of Members with at Least One Visit for Core Dental Procedures for Members with a Chronic Condition | + | + | NA | NA |
| Spending on ED Visits for Dental Conditions PMPM | - | - | - | + |
| Spending on Dental Services Excluding ED Visits for Dental Conditions PMPM | + | + | + | + |

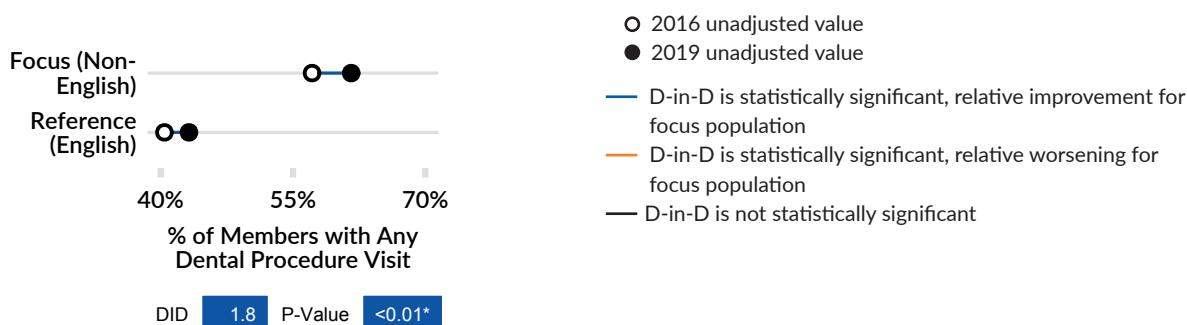
Significant worsening < > Significant improvement from baseline
 25% 10% 0% 10% 25%

+ Increase
 - Decrease
 ↓ Lower is better

Focus Population — Non-English Speaking Members

Figures 5.24 through 5.27 display oral health integration outcomes for non-English speaking members and compares changes within this focus population to changes among English speaking members. Access to dental services among persons with a chronic condition was higher for non-English speaking members than English speakers. This gap increased slightly between 2016 and 2019. For both ED and non-ED spending on dental conditions, 2016-2019 changes were not significantly different for non-English speaking members compared to English speakers.

Figure 5.24: The increase in access to dental procedures among members with a chronic condition was greater for Non-English speaking members compared to English speaking members



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

Figure 5.25: The increase in access to core dental procedures among members with a chronic condition was greater for Non-English speaking members compared to English speaking members

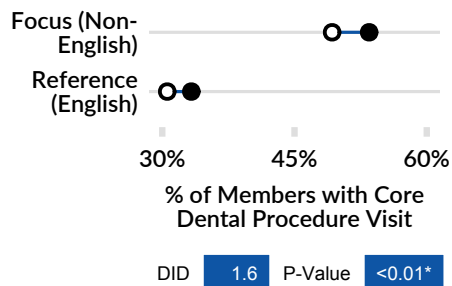


Figure 5.26: Changes in spending on ED visits for dental conditions did not differ significantly between Non-English speaking and English speaking members (↓)

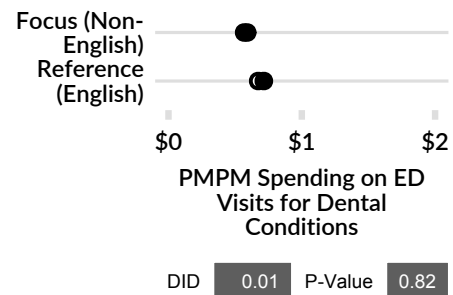
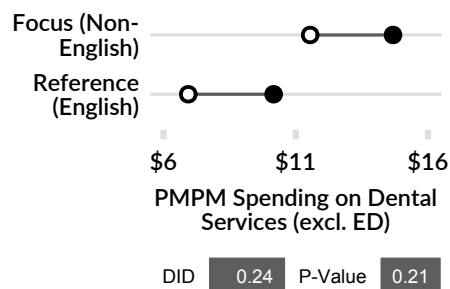


Figure 5.27: Changes in spending on dental services excluding ED visits for dental conditions did not differ significantly between Non-English speaking and English speaking members



○ 2016 unadjusted value
● 2019 unadjusted value
— D-in-D is statistically significant, relative improvement for focus population
— D-in-D is statistically significant, relative worsening for focus population
— D-in-D is not statistically significant
↓ Lower is better

Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

Focus Population — Children

Figures 5.28 through 5.31 compare changes in oral health integration measures for children versus adults. Access to dental services among members with a chronic condition was higher for children compared to adults, and the differential increased from 2016 to 2019. PMPM spending on dental services excluding ED visits increased more for children than adults. ED spending also increased slightly more among children.

Figure 5.28: The increase in access to dental procedures was significantly greater for children than adults

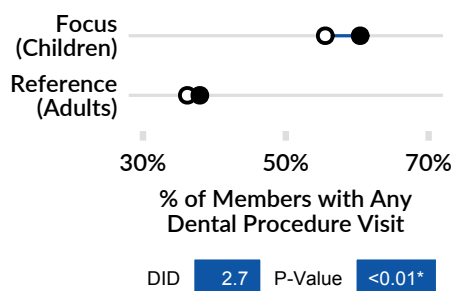


Figure 5.29: The increase in access to core dental procedures was significantly greater for children than adults

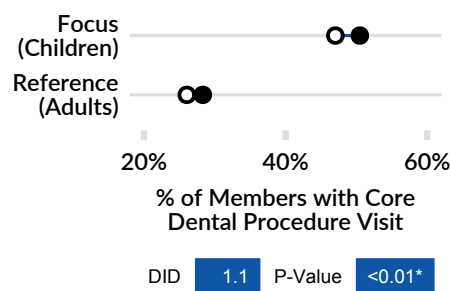


Figure 5.30: The increase in spending on ED visits for dental conditions was greater for children than adults (↓)

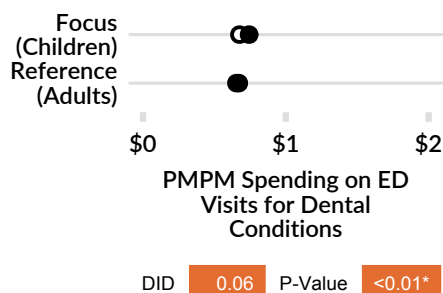
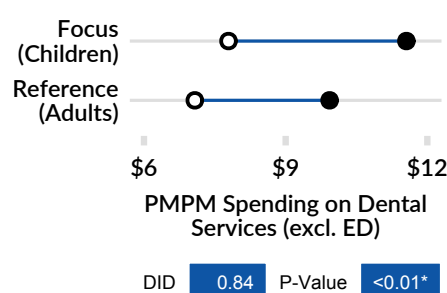


Figure 5.31: The increase in spending on dental services excluding ED visits was greater for children than adults



Note: "Non-English" includes members who indicated that English was not the main language spoken in their household.

- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant
- ↓ Lower is better

Assessing the Impacts of CCO Closure

FamilyCare, Inc., a CCO serving members in Washington, Multnomah, Clackamas, and Marion counties since 2012, ceased operations in January 2018. The majority of FamilyCare's members transitioned to Health Share of Oregon, while some moved to two other CCOs serving Marion and Washington counties. To assess whether the transition may have affected outcomes for these members, we conducted sensitivity analyses on the 2016-2019 adjusted change. We used a difference-in-differences framework to test whether the adjusted change was different for people in the tri-county region (Clackamas, Multnomah, and Washington counties).

We found that changes from 2016 to 2019 were no different or slightly greater (indicating greater improvement) in the tri-county area relative to other areas. For example, ED visits for non-traumatic dental conditions declined more markedly in the tri-county area. An exception was Dental Sealants on Permanent Molars for Children, which improved less in the tri-counties, although from a higher 2016 baseline. The increase in spending on dental services outside the ED was slightly smaller for CCO enrollees in the tri-county area, although baseline spending was higher. Overall, these results suggest that for most CCO enrollees in the tri-county area, the departure of FamilyCare did not adversely affect oral health services. Appendix G provides additional information on methods and results for these analyses.

Conclusions and Limitations

Results for oral health integration measures suggest that Oregon has made broad progress on oral health quality and access since the waiver renewal. ED use for dental conditions continued a downward trajectory between 2016 and 2019. Access to dental services and utilization of dental procedures increased between 2016 and 2019 after declining through 2015, although the percentage of members with access to a regular dentist stayed relatively flat. Both focus populations (non-English speaking members and children) saw improvements in access and utilization of dental care relative to reference populations. Several measures intended to capture progress on oral health integration also moved in the desired direction. Spending on dental conditions excluding ED visits increased from 2018 to 2019, reflecting the increase in payment rates implemented in 2018.

The results presented here should be considered in the context of several limitations. First, the analysis is based on a “pre-post” design, comparing changes before and after the waiver renewal. With this approach, we cannot separate changes that could be attributed to Oregon’s policies from secular changes occurring across the health care system. Furthermore, analyses that rely on a short pre- or post-period could be biased if those years are outlier years and not representative of general trends. Second, our analyses are intended to provide a broad assessment of progress on oral health integration. We did not evaluate the merits of specific evidence-based practices or approaches that CCOs or DCOs may have undertaken. Rather, these analyses should be seen as an assessment of the overall effects of integration efforts. Third, our analyses did not include FFS enrollees, and we did not attempt to distinguish between CCO members receiving services under a DCO contract and members who did not. Fourth, we were unable to conduct analyses stratifying by race or ethnicity, because we did not have reliable data. However, significant disparities exist in Oregon. Finally, to calculate spending measures, we used imputed values for services subject to capitation arrangements (see Appendix B for details). Our results for these measures are therefore closer to a summary measure of utilization rather than actual CCO expenditures.

CCOs' Use of Health-Related Services

Overview

Medical care is not the only way to influence health. Oregon's CCOs have the option to use HRS to reach beyond the health care system to address the social and environmental factors that affect their members' lives. HRS are broadly defined as "non-covered" services that improve care delivery and overall member and community health. This chapter examines CCOs' spending on HRS, assessing trends in HRS adoption and the use of HRS to address SDOH. We begin by providing background on the development of Oregon's Medicaid policies for HRS. We then describe our mixed methods approach and present findings.

KEY FINDINGS

- **Since the waiver renewal, the state has implemented several changes designed to expand the use of HRS and reduce barriers to addressing SDOH.** The state's efforts include guidance on the treatment of HRS in the Medical Loss Ratio (MLR) calculation, clarifying that HRS could count toward rate development, and technical assistance to support CCOs' use of HRS.
- **In response, CCOs have increasingly prioritized HRS spending during the first three years of the waiver renewal.** Total spending on HRS increased by more than 120% between 2016 and 2019, from \$7.2 million (\$0.66 PMPM) to \$16.2 million (\$1.51 PMPM). In interviews, CCOs indicated that much of this growth reflected their efforts to categorize existing SDOH programs as HRS spending. CCOs also made new and deeper connections with community-based organizations (CBOs) and expanded their toolkits for gathering information about the best ways to deploy HRS funding. However, as of 2019, HRS remained a small share (0.36%) of total spending on member services.
- **Despite the growth in HRS spending, there was considerable variability in reported spending across CCOs.** One CCO spent more than \$10 PMPM in 2019, while a small number of CCOs reported HRS spending levels that were close to zero. Within HRS classified as flexible services, the top three categories based on 2018 and 2019 spending were housing, transportation, and training and education, although their share of spending varied by CCO.
- **Despite advancements in the use of HRS, CCOs identified a variety of challenges, primarily related to a high administrative burden in tracking and reporting data.** Although HRS created opportunities for CCOs to address their members' needs, their comments indicated that use of HRS under the waiver renewal required new relationships, data, and tools.

HRS Provisions in the 2017-2022 Waiver

During the 2012-2017 waiver, CCOs were encouraged to use flexible services broadly to seek out and pay for cost-effective alternatives to medical services. Flexible services were defined as low-cost services not covered by Oregon's Medicaid program that would promote health and could replace or reduce the need for medical care. Box 6.1 provides additional background on flexible services spending prior to 2017.

Box 6.1: Oregon's History with Flexible Services Prior to 2017

A noteworthy feature of the CCO model, as envisioned in 2012, was the allowance for spending on flexible services. An early example of flexible services' potential was illustrated through a hypothetical purchase of an air conditioner for a beneficiary with congestive heart failure experiencing increased pain and difficulty breathing during a heatwave. The traditional Medicaid program paid for repeated ED visits but was limited in addressing the cause of the symptoms. However, CCOs could use the flexible services mechanism to purchase a \$200 air conditioner, addressing the symptoms and reducing utilization.

During the early years of the 2012-2017 waiver, spending on flexible services was relatively modest, with less than 0.1% of all spending attributable to flexible services in 2014 and 2015. Expenditures on flexible services were inhibited by several factors, including confusion over what was allowable, what was counted as "administrative" vs. "medical" expenses, and concerns that expenditures on flexible services could lower capitation rates for CCOs.

A 2016 update to Oregon's administrative rules clarified that flexible services were services that lacked traditional billing or encounter codes and were likely to be cost-effective alternatives to covered benefits. These services could be provided at the individual or community level. The rules required CCOs to work with Medicaid members and their care teams to determine the flexible services members should receive, and required CCOs to create formal policies on how they would work with health care providers to deliver flexible services (55.2 Or. Bull. 537).

Reference:

Kushner, J., & McConnell, K. J. (2019). Addressing Social Determinants of Health through Medicaid: Lessons from Oregon. Journal of Health Politics, Policy and Law, 44(6), 919-935. <https://doi.org/10.1215/03616878-7785823>

With the 2017-2022 waiver, the state renamed this category of spending to "health-related services" (HRS) and created two types of HRS: flexible services and community benefit initiatives. Flexible services were defined as cost-effective member-level services offered as an adjunct to medical services and focused on improving members' health. Community benefit initiatives were defined as community-level interventions focused on improving population health and could include expenditures related to health information technology.

The waiver also featured several provisions designed to expand the use of HRS and, in particular, created opportunities to use HRS spending to address SDOH. These included provisions to:

1. Clarify services which could qualify as HRS under federal rule.
2. Clarify and refine the treatment of HRS spending in the MLR calculation.
3. Introduce a Performance-Based Reward (PBR) consisting of a variable profit margin for CCOs that use HRS to contain cost growth while maintaining quality.

We describe the first two changes in further detail below. (The PBR provision had yet to be implemented at the time of writing.)

HRS Criteria

First, the waiver referenced federal rules requiring that HRS meet the following criteria (45 CFR 158.150):

1. Designed to improve health care quality.
2. Increase the likelihood of desired health outcomes in ways that can be objectively measured and produce verifiable results and achievements.
3. Directed toward either individuals or segments of enrollees, or provide health improvements to the population beyond those enrolled without additional costs for the non-members.
4. Grounded in evidence-based medicine, widely accepted best clinical practice or criteria issued by accreditation bodies, recognized professional medical associations, government agencies, or other national health care quality organizations.

Furthermore, activities that improve health care quality (per criterion 1) must meet *one* of four requirements:

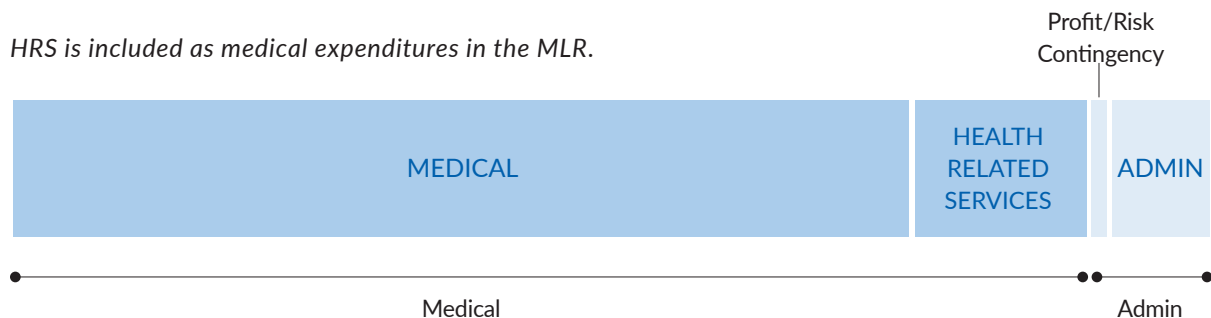
1. Improve health outcomes and reduce health disparities.
2. Prevent hospital readmissions.
3. Improve patient safety, reduce medical errors, and lower infection and mortality rates.
4. Increase focus on wellness and health promotion activities.

HRS may also include expenditures related to HIT and meaningful use requirements to improve health care quality (45 CFR 158.151).

MLR Calculation

Second, the waiver clarified that HRS-related spending meeting the above criteria would be included in the MLR numerator as required under 42 CFR 438.8 and 42 CFR 438.74, as illustrated in Figure 6.1.

Figure 6.1: Inclusion of HRS in the MLR Calculation



Additionally, the waiver allowed CCOs to calculate the MLR for a given year on a three-year rolling basis (that is, using data from the previous three years). This change allows a CCO with an MLR below the 85% threshold in a given year to “catch up” by spending more on HRS in the next year, increasing its averaged MLR, and avoiding any penalties.

Technical Assistance from OHA's Transformation Center

OHA's Transformation Center provided significant technical assistance to support HRS. The Transformation Center has hosted numerous events to disseminate information and has produced guidance documents that define HRS, provide concrete examples of HRS, and, for example, describe how housing-related services and supports can qualify as health-related services.

HRS and SDOH

In 2017, Oregon's Medicaid Advisory Council (MAC) identified CCO investment in HRS as a key mechanism to address SDOH. OHA's guidance encourages CCOs to use HRS as the “primary strategy” for addressing SDOH at the member and community levels.²⁰ The MAC further identified housing-related services and supports as a key priority, collaborating with OHA to develop guidance for how CCOs could use HRS to provide these services.²¹

While there is significant overlap between SDOH and the definition of HRS, not all HRS investments are targeted to address SDOH at the individual or community levels. For example, patient incentives for preventive care or spending to address HIT meaningful use for clinical functions could be considered HRS but would not fall under the category of SDOH. Conversely, not all SDOH investments qualify as HRS under the criteria described above.²² For example, funding for new housing development meets the definition of SDOH but is not an allowable use of Medicaid funds, per CMS. Appendix D summarizes the state's key initiatives introduced in 2020 to promote CCO investments in SDOH.

Methods

We used a convergent mixed methods approach to assess CCOs' implementation of HRS and other SDOH efforts. Quantitative analyses of expenditure data from CCOs' Exhibit L documents provided evidence of qualifying expenditures, while interviews with each CCO provided a high-level understanding of strategies adopted for HRS use. Interview data collected in mid-2020 offered a more recent picture of HRS activities than Exhibit L spending data, which spanned 2014-2019. Although the year 2020 (including CCO 2.0 implementation and the COVID-19 pandemic) was outside the formal study period for the interim evaluation, the timing of interviews provided a valuable opportunity to collect qualitative data to inform work on the summative evaluation. We have incorporated these data below. Quantitative and qualitative teams met to assess and integrate findings and themes after both had completed preliminary analyses.

Quantitative Methods

We collected HRS spending data from CCOs' Exhibit L financial reports for the years 2014 through 2019. These reports, submitted to OHA annually, contain member services expenses broken out by type, including HRS expenditures, member months, and expenses by type per member per month. Exhibit L data may not provide a complete picture of a CCO's spending on HRS in a given year, as not all CCOs reported HRS spending prior to 2019. In addition, the data may not be directly comparable across years, for two main reasons. First, OHA's requirements for reporting HRS spending in Exhibit

L have evolved to become more specific and granular over time. Second, for the years 2014-2017, HRS reporting was not subject to OHA approval, whereas for 2018 and 2019, we include only spending that was approved by OHA as qualifying HRS expenditures. We describe these limitations further in Appendix B.

We made a number of adjustments to the data, also described in Appendix B. For analyses of the 2014-2019 time period, we focus on overall HRS spending. For 2018 and 2019, CCOs provided more detailed data, allowing us to assess spending within HRS types and categories. We do not present detailed analyses of community benefit initiative spending, because CCOs assigned the majority of this spending to broad categories (“community benefit initiative” or “programs to improve community or public health”). Seventy-one percent of community benefit initiative spending in 2018 and 55% in 2019 fell into one of these two categories.

Exhibit 6.1 presents the HRS categories we report in our findings and how they correspond to category names as presented in the Exhibit L template or as entered by CCOs.

Exhibit 6.1: HRS Categories

| Category | Category in Exhibit L Template |
|--------------------|---|
| Case Management | Care coordination, navigation, or case management activities not otherwise covered under State Plan benefits |
| Food/Social | Assistance with food or other social resources |
| Home | Home and living environment items or improvements not otherwise covered by 1915 Home and Community Based Services |
| Housing | Housing supports related to social determinants of health |
| Other | Other non-covered service ¹ |
| Training/Education | Training and education for health improvement or management |
| Transportation | Transportation not covered under State Plan benefits |

¹Also reported as “Other” or “Other non-covered social and community health services and supports.”

Qualitative Methods

To assess CCOs’ use of HRS, we conducted semi-structured interviews with CCO informants. We carried out 12 interviews (representing 13 CCOs continuing from the first waiver, plus two new CCOs). Interviews included two to five informants each for a total of 34 interviewees. Four CCOs overseen by the same parent organization were covered in one interview. CCOs were provided with a list of topics to be covered in the interviews (related to HRS and SDOH) and were asked to select staff best suited to respond. Roles of the resulting informants were diverse, including CEOs, COOs, CFOs, medical officers, and staff members in areas such as community engagement, finance, health equity, quality, population health, transformation, and public relations. See Exhibit 6.2 below for a breakdown of interviewees by organizational roles. The interview guide is reproduced as Appendix C. We conducted interviews before completing Exhibit L data analyses, and thus interviews did not include detailed questions about reported expenditures.

Interviews were professionally transcribed and then coded and reviewed by a project team that met 1-2 times per week to analyze data for themes related to HRS and SDOH. We also performed a

qualitative review of HRS spending reported by CCOs in Exhibit L to assess the alignment of financial reporting with interview data. In addition, we reviewed publicly available documents and held informal discussions with OHA staff.

Exhibit 6.2: Key Informant Interview Roles and Counts

| Key Informant Category | Number of Interviewees |
|---|------------------------|
| Community Engagement & Public Relations | 5 |
| Social Determinants of Health and Health Equity | 8 |
| Executive Leadership | 16 |
| Government Affairs | 2 |
| Strategic Initiatives, Contracting & Finance | 3 |
| Total | 34 |

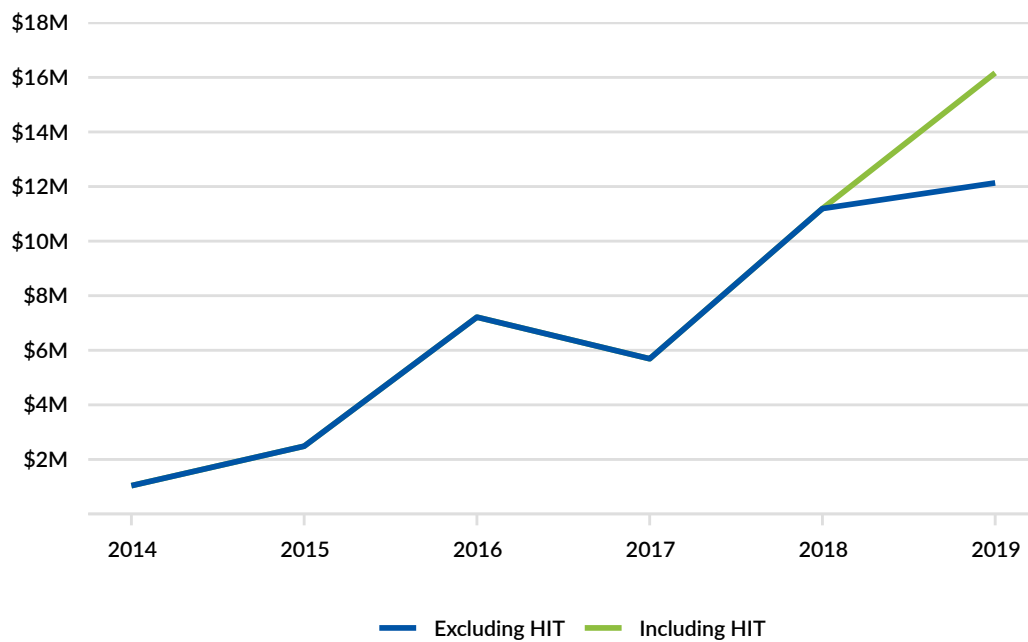
CCOs' Use of Health-Related Services

Findings reported here reflect a mix of quantitative results from analysis of Exhibit L spending and qualitative data from CCO interviews. Where possible, we use qualitative data to interpret, contextualize, and elaborate on quantitative results. First, we assess overall adoption of HRS and variation in HRS spending across CCOs. We then discuss CCOs' approaches to prioritizing HRS investments for addressing SDOH and describe how CCOs allocated spending across HRS types (flexible services, community benefit initiatives, and HIT) and categories (housing, transportation, food, etc.). Finally, we present qualitative findings on CCOs' partnerships with external organizations to deliver community benefit initiatives and describe challenges with Exhibit L reporting. Appendix G provides detailed data tables summarizing annual HRS spending at the CCO level.

Adoption of HRS

CCOs indicated in interviews that the waiver renewal had prompted an increased focus on addressing SDOH, further sharpened through the CCO 2.0 contracts. Most CCOs were aware of the state's guidance about using HRS as their primary vehicle for addressing SDOH and were working to implement this approach, although some continued to support these efforts through other mechanisms, including previous-year revenues and quality incentive metric bonuses. These statements aligned with data from CCOs' Exhibit L reports, which showed HRS expenditures increasing overall during the study period. Figure 6.2 displays the growth in HRS spending between 2014 and 2019.

Figure 6.2: Total Health-Related Services Spending (\$ Million), 2014-2019



Note: Trillium did not submit Exhibit Ls in 2014 and 2015, so their HRS spending is unknown and not included in this figure. See Appendix B (Exhibit B.4) for further detail on missing HRS data.

Total HRS spending rose from \$1 million in 2014 to \$16 million in 2019. In 2014, HRS spending PMPM was \$0.11 or 0.03% of total member services spending. By 2019, HRS spending had increased to \$1.51 PMPM or 0.36% of member services spending. Beginning in 2019, CCOs were required to report spending on HIT separately from community benefit initiative spending. CCOs reported spending \$4 million on HIT in 2019, with HIT accounting for two-thirds of the growth in HRS spending between 2018 and 2019.

Waiver, CCO 2.0 initiatives led to greater uptake of HRS

Prior to the waiver renewal, numerous CCOs had already made significant investments in addressing SDOH in their communities. With the waiver renewal, most CCOs studied OHA's guidance on HRS for SDOH efforts and aimed to fit the majority of their SDOH expenditures into HRS requirements. Thus, much of the growth in HRS spending reflected CCOs' efforts to report existing SDOH spending as HRS.

Most CCOs indicated that, under the waiver renewal, both leaders and staff found it easier to prioritize HRS spending. One CCO respondent observed that the new contract and state guidance had created greater awareness of SDOH among CCO staff and helped justify to CCO leadership the use of funds to meet members' social needs.

Some mentality of our staff I've noticed has changed where they're saying, "Okay, so, CCO 2.0, this new contract, this new leadership mentality that I see, makes it okay." I don't need to decline and say, "This seems out of the ordinary. This doesn't have anything to do with health."

Other features of CCO 2.0, such as the promotion of traditional health worker (THW) engagement, also helped increase the use of flexible services by increasing CCOs' interactions with members experiencing social needs. As an example, one CCO hired more THWs into its corps of care

coordinators in anticipation of CCO 2.0, resulting in increased identification of social needs and expanded funding for flexible services.

[By] putting more staff out there and more proactively trying to engage with our membership, we're finding additional needs that didn't come up to us before. So, we anticipated that, and we allocated additional funds for 2020.

HRS spending varied by CCO

Within the overall growth trend for HRS, however, there was significant variation in spending across CCOs. Figure 6.3 displays HRS spending by CCO in 2018 and 2019. On a PMPM basis, HRS spending increased for most CCOs between these years, ranging from \$0 to \$4.40 PMPM in 2018, and from \$0.04 to \$10.29 in 2019.

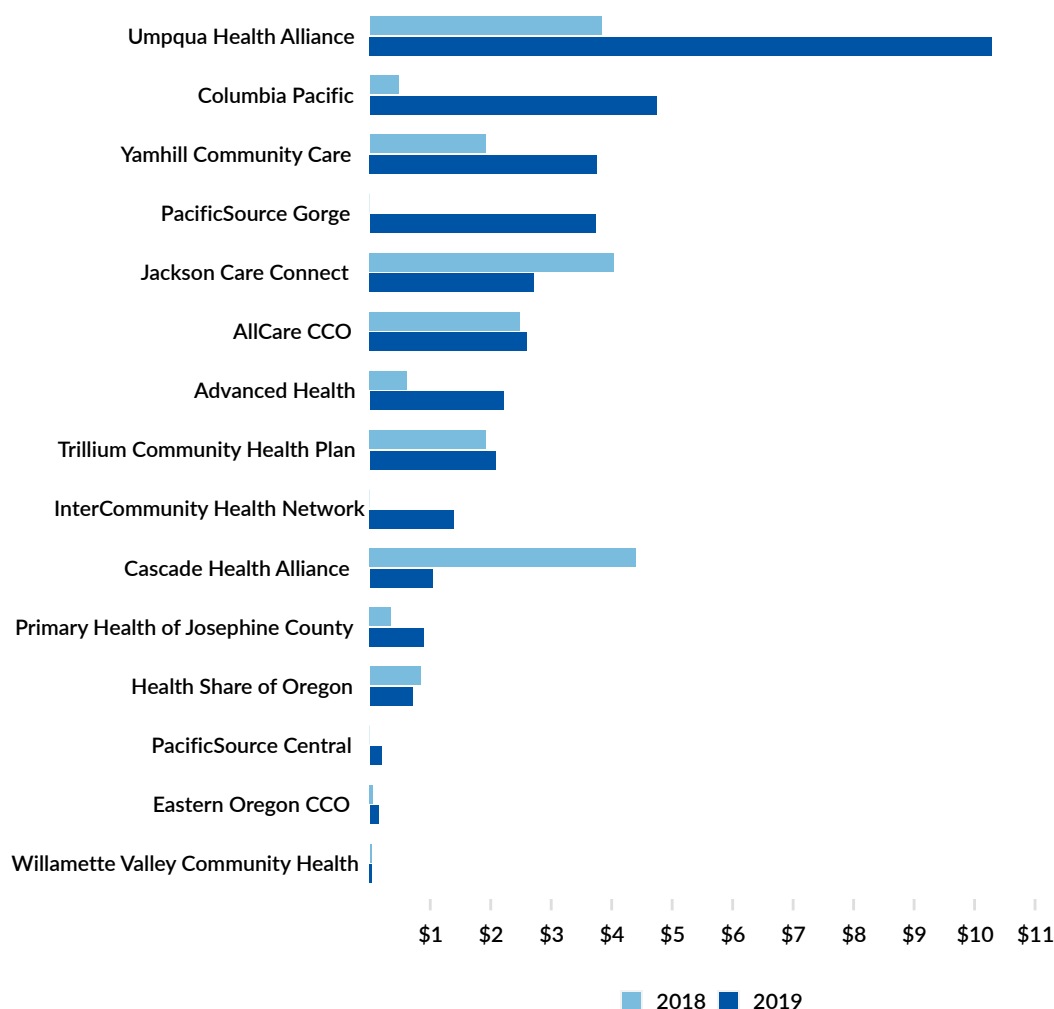
Interview data suggested several reasons for this wide variation. First, interviews indicated that, in 2020, CCOs were in varying states of implementing SDOH planning. Some CCOs were continuing priorities or programs implemented in CCO 1.0, while others had shifted to new strategies and investments or were still in the planning stages of some efforts. Thus, some variation among CCOs in HRS spending appeared to reflect differing levels of program maturity.

Second, a small group of CCOs reported still funding their SDOH work primarily through non-HRS spending mechanisms. For example, one CCO that reported minimal HRS expenditures stated that it typically invested between \$1 million and \$1.5 million annually on SDOH-related projects from its quality incentive metric earnings. Two CCOs reported investing several million dollars in SDOH and community projects that were not reflected on their Exhibit L reports.

Some CCOs with established SDOH programs described continued challenges in reconciling SDOH needs with HRS requirements. For example, several CCOs were confronting urgent community housing shortages that might have motivated contributions to new housing construction. However, that kind of capital investment did not qualify as HRS (a prohibition not specific to Oregon's waiver, but part of the national Medicaid policy).

[HRS] works really well if you have a service to invest in. One of the places that we're getting a little stymied is when we have a clear need --it's articulated by our board. It shows up in care coordination when we're working with numbers and doing assessments. We're hearing it over and over from the community. We're hearing it from our members. In order to deliver that service, we would need to develop it, and it's not clear where our role is in developing new services, and I'm talking specifically about housing services here. Building an apartment building isn't something the CCO can do. How do we come in and support our partners doing that?

Figure 6.3: PMPM Health-Related Services Spending (\$) by CCO, 2018 and 2019



Prioritizing HRS Investments to Address SDOH

To select priorities for their HRS and SDOH spending, CCOs relied on input from various advisory and assessment structures, including their Community Advisory Councils, Community Health Assessments, Community Health Improvement Plans, and CCO boards. They made use of available data to orient their HRS and SDOH programs.

Obtaining data needed for effective SDOH planning remained a challenge

CCOs indicated that they did not have access to data needed to effectively prioritize and plan for HRS and other SDOH work. CCOs' capacities to access, store, and synthesize SDOH-related data varied significantly. CCOs owned by or affiliated with larger organizations often had access to larger data platforms and warehouses. Other CCOs struggled to set up these systems or needed to make large HIT investments to enable them.

CCOs have engaged in efforts to collect data on social needs. They have begun to ask providers to submit "Z codes" (codes indicating specific social needs) with claims data or purchased access to the PRAPARE (Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences) assessment tool. CCOs have also participated in wider SDOH screening programs, such as CMS's Accountable Health Communities. Some CCOs relied on community surveys or community health

assessments. As with REALD data, some CCOs struggled to manage social needs and screening data on a unified, accessible platform.

We have a very large service area with a lot of different types of providers and community partners. And trying to figure out how we're going to gather all of this data in one place -- it's something that's a unique challenge that I know everyone is experiencing right now.

There was some tension about whether the collection of social needs data should be a CCO or community partner responsibility. Not all partners were equipped or willing to collect data.

If you ask provider in a very small town like us, that is an additional set of work. It's not the work that they... they empathize with it, but that's not the work that they went to school to do.

CCOs have increased their participation in community information exchange (CIE) platforms as another way to “know where the needs are.” As of February 2021, nine CCOs were listed as partners on the website of ConnectOregon, run by the CIE vendor Unite Us. Another CCO had adopted the “Aunt Bertha” platform.

Some respondents mentioned using medical risk models (including the Prometheus tool, provided by OHA, and the Milliman Advanced Risk Adjuster, which some CCOs had acquired), to merge SDOH efforts with broader population-health efforts, combining SDOH goals with the aim of reducing utilization of ED and inpatient care.

CCOs noted the utility and challenges of REALD data. Enrollment files from OHA served as the primary source of REALD data. However, these data were often missing. Data on primary language was typically more complete than race and ethnicity, so some CCOs relied on these data to look for inequities in services.

CCOs were using multiple strategies to fill in missing population data. One CCO had a “concierge” program that reached out to welcome new members and ask initial questions, including race and ethnicity. However, the program experienced some hesitancy from members:

I think one of the challenges around there, when you ask somebody, “What’s your race,” they have a tendency to feel like if they provide that information, they would be profiled, when, in fact, the intention is completely benign. I think stigmas and fears around providing the information, knowing that it’s going to be used for good and not to limit their services, has been a real challenge.

A small number of CCOs appeared to have made significant inroads into analyzing subgroups experiencing disparities. These changes led to more informed and targeted approaches to addressing social needs. For example, one CCO identified disparities by specific member subgroups with particular needs, such as members facing housing challenges:

You’re much more likely to experience a higher population of homeless youth who are LGBTQ+. Then, if you looked at the adult population, you’re more likely to run into people who are indigenous and people of color who have language barriers. The health equity piece becomes really, really practical.

CCOs relied on a variety of inputs to guide HRS and SDOH investments

CCOs used input from multiple sources to identify SDOH target groups and prioritize investments. Most mentioned using Community Health Improvement Plans or Regional Health Improvement Plans

to guide HRS decisions. Many CCOs had provided their CACs with dedicated budgets to disburse to community partners for SDOH related projects using grant-type application processes.

I really appreciate our CAC from the perspective of, they will really labor over spending \$5,000 in the community. And it's a long conversation. They have developed, with help from our administrative team, a lot of policies and procedures that allow them to take in applications with some standardized criteria to basically proliferate the reporting and outcomes data that they're looking for from these programs.

In addition, CCOs used input from their boards (which include representatives from community organizations, local agencies, and providers), other committees, and from staff working on SDOH projects to make decisions on community benefit initiatives and SDOH investments.

Most CCOs found the housing priority designated by OHA for 2020 compatible with internal priorities. CCOs supported case-management services so that community housing partners could devote more dollars to capital improvements. Several CCOs lamented that they were unable to address shortages of housing directly through construction.

Spending on Community Benefit Initiatives and Flexible Services

Figure 6.4 displays types of HRS spending in 2018 and 2019. In 2018, just over 75% of HRS spending (\$8.8 million or \$0.84 PMPM) went toward community benefit initiatives, with the remainder on flexible services (\$2.4 million or \$0.23 PMPM). (In 2018, CCOs were not required to separate HIT spending in their reporting. Thus, community benefit initiative spending in 2018 is likely to include some HIT spending). In 2019, spending on community benefit initiatives and flexible services grew to \$0.86 and \$0.28 PMPM, respectively. CCOs spent \$0.38 PMPM on HIT in 2019.

Figure 6.4: Health-Related Services Spending (\$ PMPM) by Type, 2018-2019

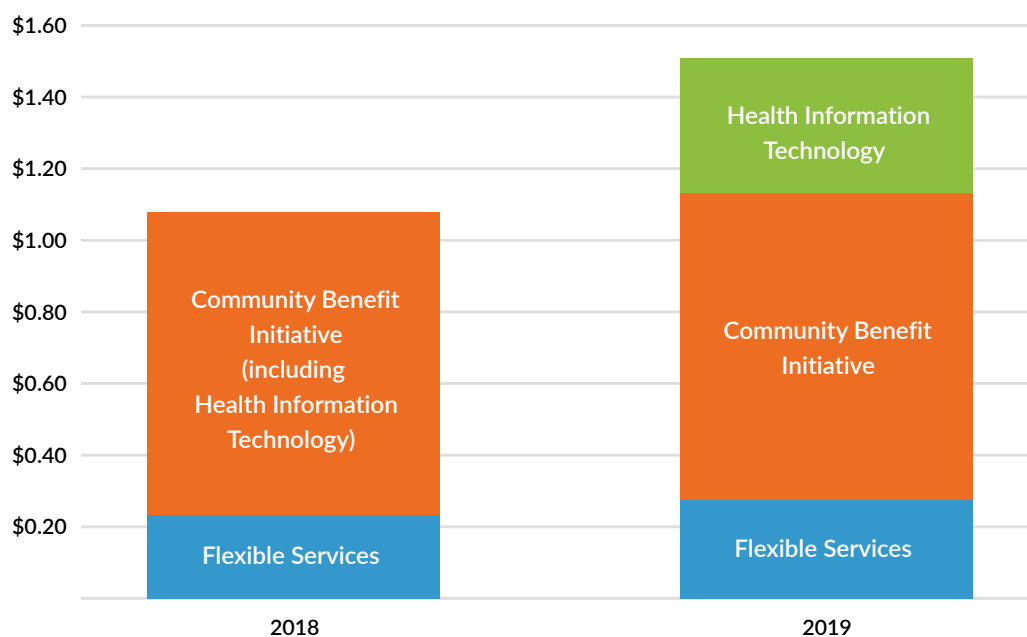
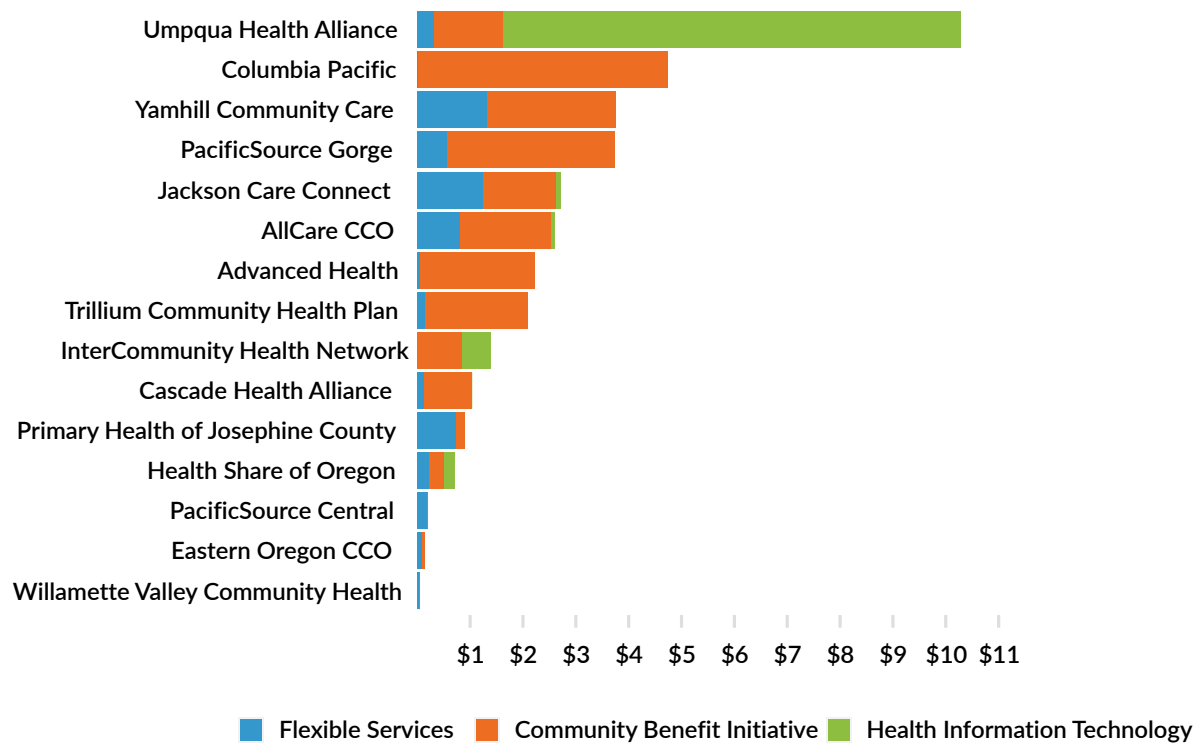


Figure 6.5 displays HRS spending by CCO in 2019, categorized as community benefit initiatives, flexible services, and HIT. Community benefit initiatives were the predominant form of HRS spending across most CCOs. One exception was Umpqua Health Alliance, which spent the bulk of its 2019 HRS dollars (\$2.8 million or \$8.68 PMPM) on HIT. Three CCOs—Umpqua Health Alliance, Health Share and Intercommunity Health Network—accounted for the vast majority (98%) of CCO-wide HIT spending. This included expenditures to integrate electronic medical record systems and incorporate social risk screening for community partners.

Figure 6.5: Types of Health-related Services Spending (\$ PMPM) by CCO, 2019



Community Benefit Initiative Investments

Community benefit initiatives are community-level interventions focused on improving population health. They are available to CCO members but may include other community members if additional costs are not incurred. Spending on community benefit initiatives frequently involved funding community nonprofit organizations to address CCOs' SDOH priorities.

Community benefit initiatives applied to multiple SDOH areas. Exhibit 6.3 provides examples (cited by CCO interviewees) of community benefit initiative projects within the various SDOH areas. Exhibit L data did not provide sufficient information to determine the allocation of community benefit spending across categories. Although CCOs were required in Exhibit L to designate a category for community benefit spending, they categorized the majority of these expenditures into two nondescript categories: "community benefit initiative" or "programs to improve community health."

Exhibit 6.3: Examples of Community Benefit Initiative Projects, by SDOH Area

| SDOH Area | Examples of Community Benefit Initiative Projects |
|--|---|
| Housing | <ul style="list-style-type: none"> • “We have a medical recuperation program for individuals discharging from the hospital who are homeless and need a place to recuperate. We provide a place for those individuals to live to receive homecare and to get better.” |
| Food security | <ul style="list-style-type: none"> • “We also started with [CCO name] Veggie Rx, and it was a pilot in partnership with our diabetes prevention program to get folks access to fresh fruits and vegetables.” |
| Access to communications or technology | <ul style="list-style-type: none"> • “Access to broadband and infrastructure, and then also ensuring that our members have access to information. So one of the projects that we’ve implemented in partnership with another organization is bringing information directly through SMS services to a member phone. So we push, we’re able to get members information almost on an instant basis. Cell phone, SMS, text messaging.” |
| Care coordination in the community | <ul style="list-style-type: none"> • “[Program] is part of our HRS and kind of internal infrastructure program and a way that we work with our provider network to support our maternal child population that’s also struggling with SUD issues.” |
| Community partner capacity-building | <ul style="list-style-type: none"> • “We’ve worked a lot regarding adversity, trauma, and toxic stress, and we supported the development of [local initiative], which is a community collaborative where we have trained master trainers by ACE Interface that have brought the awareness of the effects of toxic stress to our community.” • “An important area of investment, especially in our region, is supporting organizations to actually apply for funds. We call it “universal tools,” but grant writers and supports that help organizations that might have limited services or a capacity, I mean, to apply for funds other than CCO funds.” |

Flexible Services Spending

Flexible services are cost-effective services provided to individual CCO members that are outside covered Medicaid health benefits, promote health, and may replace or reduce the need for medical care. Exhibit 6.4 displays examples of flexible services CCOs provided to their members based on Exhibit L reporting in 2019 and interview data.

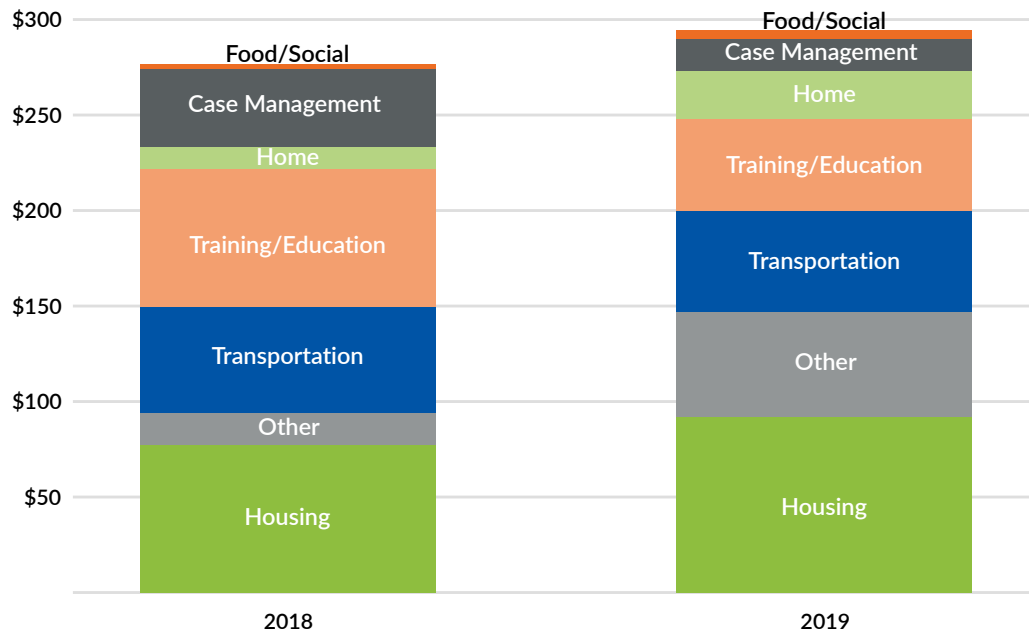
Exhibit 6.4: Examples of Flexible Services Expenditures, by Category

| HRS Category | Examples of Flexible Services |
|--------------------|---|
| Case Management | Birth certificate, driver's license and other IDs, background check, cell phone minutes, gas card, miscellaneous items |
| Housing | Short-term rental assistance, motel rooms, transitional housing, storage, moving costs, mortgage payment, utilities |
| Home | Air conditioner, air filter, air purifier, bathroom scale, refrigerator, mattress, furniture, heater, items for baby, washer/dryer, bath chair, ADA ramp, camping equipment |
| Transportation | Bus passes, van rides, gas, car insurance, taxis, bike or car repair, purchase of bike, tires |
| Food/Social | Meals, crockpot, hot plate, adoption fee |
| Training/Education | Recreation center passes, cooking classes, gardening program, summer camp, foster youth program, pain management training, youth soccer league, SUD diversion class, self-help course, workforce development, CPR training, child birth class, yoga class, guitar lessons, parent education |
| Other | Computer tablets, cell phones, incentive gifts for well care visits, art supplies, hair care, court fees, orthodontia, therapy pet supports, iPad, medical legal partnership, non-covered medical costs |

Figure 6.6 displays categories of spending on flexible services in 2018 and 2019. Housing was the single largest expenditure in 2018 and 2019, growing from \$77 to \$92 per 1,000 members per month. Training and education and transportation expenses were also common in both years. In 2019, expenses categorized as “other” grew substantially.

Figure 6.7 displays the percentage of flexible services spending in each category by CCO. There was wide variation in CCOs' allocation of spending across categories. For example, PMPM expenditures by AllCare CCO and Umpqua Health Alliance were focused largely on transportation. Their investments in this area comprised most of the statewide spending in this category. In contrast, Yamhill Community Care, Primary Health of Josephine County, Cascade Health Alliance, and PacificSource Gorge allocated the bulk of flexible services spending to training and education. Health Share of Oregon, Columbia Pacific, and Willamette Valley Community Health had the highest PMPM spending on housing-related services. Interview data suggested that some CCOs made additional community benefit investments in these areas that were not reported as HRS.

Figure 6.6: Monthly Flexible Services Spending (\$ per 1,000 Members) by Category, 2018-2019



| Year | Housing | Other | Transportation | Training/ Education | Home | Case Management | Food/ Social |
|------|---------|-------|----------------|------------------------|------|--------------------|-----------------|
| 2018 | \$77 | \$17 | \$55 | \$72 | \$11 | \$41 | \$3 |
| 2019 | \$92 | \$55 | \$53 | \$48 | \$25 | \$16 | \$5 |

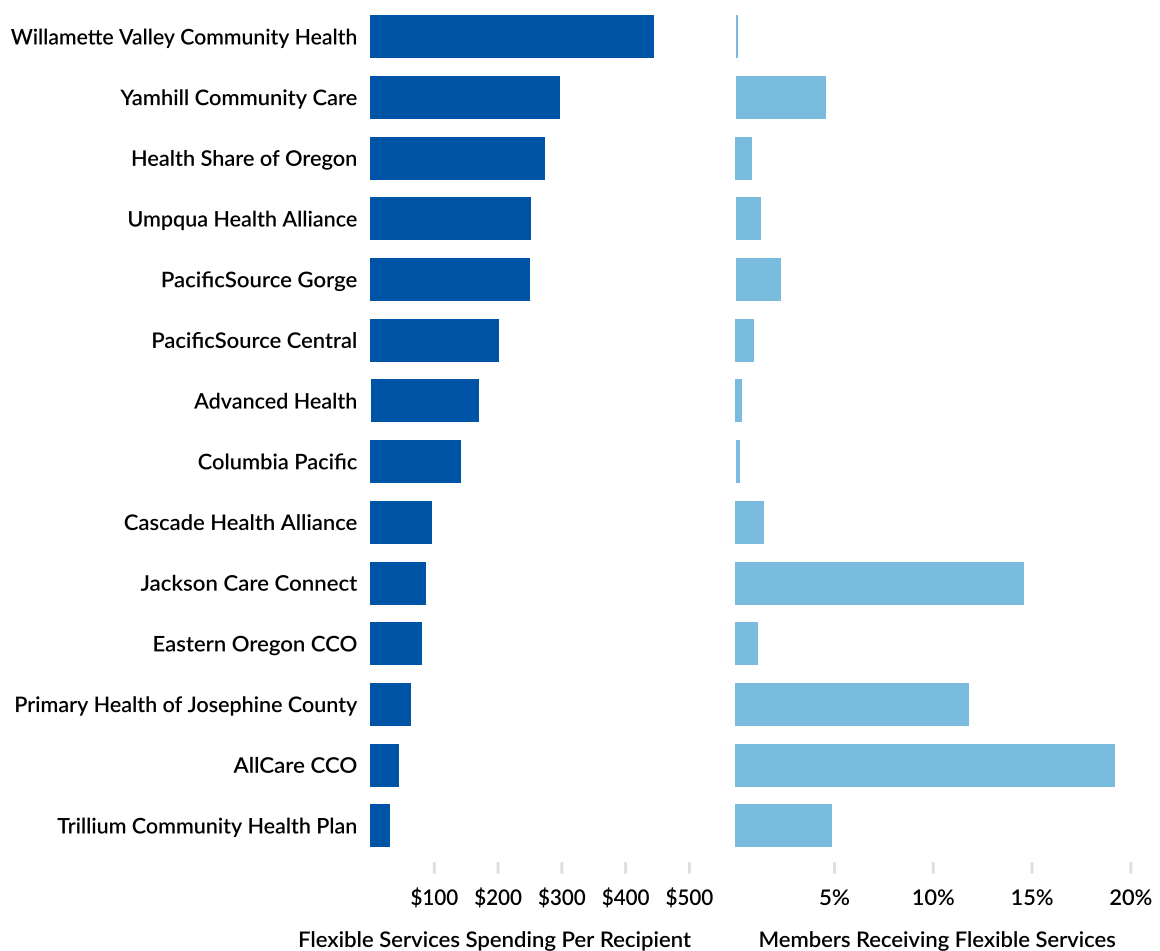
Figure 6.7: Percentage of CCOs' 2019 Flexible Services Spending by Category



Figure 6.8 displays 2019 flexible services expenditures per recipient and the percentage of members receiving flexible services, by CCO. In general, CCOs with high spending per recipient (Willamette Valley Community Health, Yamhill Community Care) served lower percentages of their member populations. CCOs with particularly high percentages of members receiving flexible services (e.g., AllCare CCO, Jackson Care Connect) had lower spending per recipient.

Figure 6.8: Scale and Reach of Flexible Services Spending, by CCO, 2019

CCOs with higher spending per recipient generally reached a smaller percentage of members.



CCOs expanded their use of flexible services in 2020. Interviewees described how these expansions catalyzed new infrastructure for processing flexible services requests and working with new community partners. Many CCOs created online request forms to facilitate access for members and other providers and partners. CCOs also increased outreach to promote new requests, including seeking help in reaching traditionally underserved communities (e.g., Spanish speakers) through new partnerships.

There's trust issues and language issues there. So we gave directly to our community partners, hopefully to get to the members that we don't reach. Or that maybe wouldn't go online. Yes, we translate our documents into Spanish, but maybe they don't know about going online, and using this form, and don't have access to the resources in the same way.

HRS Partnerships

While some flexible services were delivered to members directly by CCO staff, most community benefit initiatives and larger projects involved CCOs partnering with external organizations. HRS partners included public health agencies, CBOs and, in some cases, larger foundations. These partnerships were characterized by differences in longevity and depth. Some had begun early during the first CCO contract period and continued since, while others represented new relationships to address specific SDOH areas. Some CCOs used the term “anchor partner” to identify a CBO or

foundation with which they had a longstanding or key relationship. One respondent described the heterogeneous partnerships of a rural CCO:

Our anchor partners have been the YMCAs, and there are several, [housing CBO], which is the housing organization that I referenced. I think those are our main anchors. That being said, we support probably close to 30 other organizations in various ways. It's not that those are the most important. It's just that those have been probably the longest relationships of the ones I just mentioned. Those two were selected because they really were the only ones filling a gap that was childcare provision and, at the Y, and housing for [housing CBO].

Partnership structures and funding arrangements varied in complexity

CCOs used a spectrum of contractual arrangements, ranging from grant-like gifts with few reporting obligations to provider-like contracts that allowed detailed follow-up. The structure of these arrangements and the levels of reporting they required affected the extent to which CCOs could report on project outcomes and return on investment (ROI).

Two CCOs stood out for articulating a progression in funding structures, beginning with a short-term grant or pilot engagement, and moving into an increasingly performance-based contract. One CCO shared this example with a housing partner:

(A current project) is a good example. It used to be called [CBO name], and then it was [new CBO name]... They were building ramps in the community, and doing handrails, and things like that. We're giving them grants, giving them grants, year after year after year. Then, [CCO program manager], realizing this was an ongoing system that's happening [asks], "How can we just pay them?" The contract folks step in the picture, and the network folks. [CBO name] now actually has an NPI number...they've got a Medicaid ID number...It's in the physical health bucket. There's an ROI for it that I can analyze to then justify if we're going to give them more money or less money.

Some CCOs used foundations or similar organizations to act as intermediaries between the CCO and local organizations. A rural CCO in the planning stages of its current SDOH program spoke of contracting with an intermediary partner to augment the CCO's capacity at managing other partners.

Maintaining stable funding levels for community partners was an additional priority for CCOs, especially as partnerships became more interdependent. Uncertainty about future CCO budgets and availability of funds for SDOH work was presented challenges to stable, long-term partnerships. The need to "braid" funds from multiple sources while maintaining compliance with funder policies was also a concern.

Community capacity for addressing SDOH was limited

Even when funding was available, there was limited capacity in some communities to carry out SDOH projects. Some local partners had limited staff, lacked information technology infrastructure, and did not have the capacity to pursue external funding. These capacity issues were particularly acute in rural and frontier areas.

One CCO described taking an "active investor" model with partners:

We're usually pretty involved and deeply invested in the development of new programs and partnerships just to make sure that we're getting what we're hoping out of it, that the partner is getting they're needing out of it. It's a lot of collaboration in that space.

Several CCOs voiced the desire to support community capacity that would continue to live on and grow, even if the CCO ceased to exist.

That's really a focus of ours, is building capabilities that are local. Building infrastructure that's local. Building the resource base that is local. So that, at some point, we've stood up organizations and capabilities that don't require ongoing investment by the CCO because we've scaled the wall, if you will, and organizations are able to get over to the other side.

Use of HRS to respond to COVID-19 and Wildfires

COVID-19 and the large wildfires affecting Oregon in 2020 created unprecedented challenges and health risks. In response to the pandemic, OHA released its pool of quality funds early to CCOs. These were immediately put into use in communities across Oregon, often capitalizing on the flexibility of HRS infrastructure. Some CCOs took steps to create new programs to deal specifically with the impacts of COVID-19. One CCO set up a "COVID -19 Community Support Program" via Unite Us to help individual members apply for flexible spending funds.

We went ahead and created this program called the COVID-19 community support program...Using Unite Us, our members were able to just go online and fill out this form. We made it easier than we've ever had it before for members to access their flexible services funds. I think we multiplied this project—the amount of funds spent-- by about 20 from previous years' spending on flexible services. Our leadership buy-in was really fantastic there, though, to say, "Yes, let's allocate these funds to this COVID response, emergency response."

Telehealth and easy access to technology became important topics and investments for CCOs.

We were able to provide Samsung smartphones with three months pre-paid service and video capability all over the state basically to promote connectivity and telehealth. One of the clinics that we provided it to..., [its] population was very badly hit by the wildfires...That was something that we were able to, from the health-related services side, provide as well.

Tracking HRS Outcomes and ROI

CCOs exhibited varying levels of ability to track HRS outcomes and estimate ROI from HRS spending. They pursued different strategies for evaluating outcomes of their HRS and other SDOH investments. These ranged from discussions of precise ROI estimations to remarks about "community goodwill." Some CCOs spoke of ROI measurement as a long-term goal that was currently out of reach. Others challenged whether the returns on longer-term, population-based investments were measurable in the time frame addressed by Exhibit L. Most CCOs acknowledged ongoing challenges with tracking outcomes and assessing the value of different interventions to target investments more successfully in the future.

A few CCOs indicated they were tracking member-level outcomes of particular programs, often collaborating with community partners on evaluations. One CCO took new programs through a pilot and evaluation phase before committing to a longer-term partnership, using member-level outcomes of different types of utilization (primary care, behavioral care, emergency department, inpatient, non-emergent medical transportation) to measure program outcomes. A second CCO exhibited a sophisticated understanding in evaluating ROI patterns across SDOH interventions:

It's really interesting because if you look at two years of data, you'd stop a program. Year one, they're at whatever their baseline is. Year two, they're better engaged in care, if things are working right, so their [health risk] score actually goes up. They are a riskier proposition because they're suddenly using their health care. Then, if you look at subsequent years in a successful program arc, like we've seen, it starts going back down... It's kind of a nice predictable arc for a program that's being effective in helping to offset those member costs.

In contrast, another CCO used a low-burden grant process for SDOH projects with fewer reporting requirements. However, they described greater difficulty estimating efficacy of spending, settling for “a little bit” of accountability for funding and some reporting.

So, yes, the ROI is important, and we can't always measure it from a dollar standpoint, that there's not always something there. But when you hear the stories, the goodwill that it builds in the community, the impact you can make on certain individuals, when you hear those stories coming back as these projects wrap up each year, that means a lot to the board and to the community.

Although the state asked CCOs only to “describe intended measurable outcomes” in its reports, multiple CCO teams appeared to interpret this as an imminent requirement for outcomes data. This perception in some cases introduced new pressures on community partners that did not have experience reporting detailed outcomes, potentially stressing partner relationships.

There's this push—this sort of friction with, “Okay, we need to trace this to health outcomes. We have to for our return on investment, for our reporting to the Oregon Health Authority, and for showing that these projects are evidence-based, and do reduce things—health outcomes like emergency department visits, or incidence and prevalence of diabetes, right?”... Since we're so new to this, and we don't collect the data on this—we haven't historically, we do now, and we're working on that -- there is sort of this friction of, “What can we depend on our community partners for?”

One CCO, recognizing challenges with tracking outcomes, had instead gone the route of choosing an intervention with an established evidence base as the focal point of its SDOH efforts. This strategy, sanctioned by OHA, helped the CCO support a childhood intervention with a long window of ROI and reduced concerns about demonstrating short-term ROI. No other CCOs, however, were explicitly using that approach.

One CCO pointed out that much SDOH work took place through internal work of CCO staff, such as care management or health equity teams, which would not be captured as HRS spending. ROI for adding staff to address SDOH, which several CCOs pointed out was necessary for building out programs, was typically not captured and difficult to assess. One CCO management team member explained:

When there are direct payments to third parties, those are relatively easy to track. Because health equity and social determinants is so interwoven with all our other endeavors and population, we don't track costs that way. We might have to go back and do some serious homework.

Exhibit L Reporting

OHA has improved the utility of information reported by CCOs on their HRS spending with CCO 2.0, allowing for much more detailed analysis. As the volume of HRS spending reported increased in 2018 and 2019, the level of detail reported for each expense or investment has increased as well. The reports, however, still exhibit areas of variation between how CCOs are recording expenses,

and seeking further consistency in reporting practices across CCOs could help with analyzing expenditures across CCOs and across years.

For example, CCOs showed variation in the number of individual flexible services they were reporting. One CCO included more than 100 lines of individual services in its report, while another, of comparable size, reported seven. Another CCO reported many thousands of dollars in transportation flexible services with only a handful of individual member IDs as recipients. These variations and anomalies may reflect differing capacities to collect data or different understanding of reporting instructions.

In addition, CCOs included some individual-level expenditures (such as case management) as community benefit initiatives, presumably because they benefited both members and non-members. Reporting these services as community benefit initiatives, however, reduced the potential for tracking provision of HRS to individual members.

Reporting requirements brought considerable administrative burdens

CCOs indicated that there was a significant time and personnel burden associated with collecting and maintaining the data required for Exhibit L. Some CCOs required two staff members to manage flexible services administration and reporting. At least one CCO mentioned avoiding the HRS mechanism even for expenses that probably qualified because of the complexity of reporting involved.

It just hasn't made a lot of sense for us all the time to go through every single investment we're making in every single region to figure out if it fits into a health-related services rubric, because I don't think the benefit of doing that is aligned with the urgency of the work.

Several CCOs described lengthy HRS “reconciliation” communications with OHA to explain and justify line items reported on Exhibit L. One CCO questioned whether the focus on detailed reporting might be overshadowing the assessment of outcomes, which it saw as ultimately more important.

Broad Trends in Quality and Costs

The CMS-approved evaluation of Oregon’s waiver renewal is intended to assess how enrollees experience HRS as well as the impact of HRS on quality and costs by addressing the following four hypotheses:

- 3.2** Enrollees receiving HRS will report satisfaction with those services and better patient experience overall.
- 3.3** Use of HRS will be associated with reduced utilization of more intensive or higher-cost care.
- 3.4** Use of HRS will help address social determinants of health to improve individual and population health outcomes.
- 3.5** Use of HRS will be associated with reduced growth of total spending and spending in high-cost settings (e.g. ED and inpatient) and with sustained or increased spending on primary or preventive care.

Although we cannot assess these hypotheses rigorously with data available at the time of the writing of this report, this section provides information on ten relevant measures of quality and cost derived from claims and survey data:

- **Members with Any Primary Care:** Percentage of members who had at least one visit to a primary care provider during the measurement year.
- **Getting Care Quickly:** Average of two percentages based on CAHPS survey data; percentage of members who said they usually or always got care for illness or injury as soon as needed, and percentage of members who said they usually or always got non-urgent/routine care appointments as soon as needed within the last six months.
- **Getting Needed Care:** Average of two percentages based on CAHPS survey data; percentage of members who said it was usually or always easy to get needed care, tests, or treatments, and percentage of members who said it was usually or always easy to get appointments with specialists as soon as needed within the last six months.
- **Rating of All Health Care:** Percentage of members (based on CAHPS survey data) who rated all their health care in the last six months an 8, 9, or 10 on a scale of 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible.
- **ED Utilization per 1,000 MM:** Number of ED visits per 1,000 member months of enrollment.
- **Member Rating of Health Status:** Percentage of members (based on CAHPS survey data) who rated their overall health as good, very good, or excellent.
- **Total Spending PMPM:** Total spending on ED, primary care, prescription drugs, inpatient, behavioral health, and other outpatient care, divided by months of enrollment.
- **ED Spending PMPM:** Total spending on ED services (excluding behavioral health services), divided by months of enrollment.
- **Inpatient Spending PMPM:** Total inpatient spending (facility and professional, excluding behavioral health services), divided by months of enrollment.
- **Primary Care Spending PMPM:** Total spending on primary care services (excluding behavioral health services), divided by months of enrollment.

Table 6.1: Adjusted Change in Measures of Quality and Costs, 2011-2019 and 2016-2019

| Measure | | 2016 | 2019 | Adj. Change 2016-2019 | Adj. Change 2011-2019 |
|--------------------------------|--------|----------|----------|--------------------------|--------------------------|
| Members with Any Primary Care | | 75.7% | 79.4% | 0.1 | 0.0 |
| Getting Care Quickly | \$ ☀ | 80.9% | 83.3% | 2.4 | NA |
| Getting Needed Care | ☀ | 77.8% | 80.0% | 2.3 | NA |
| Rating All Health Care | ☀ | 67.2% | 70.9% | 3.5 | NA |
| ED Utilization per 1,000 MM | ↓ \$ ☀ | 46.4 | 46.0 | -6.2 | -9.9 |
| Member Rating of Health Status | ☀ | 70.2% | 68.1% | -1.7 | NA |
| Total Spending PMPM | ↓ | \$239.10 | \$279.81 | 46.07 | 13.92 |
| ED Spending PMPM | ↓ | \$13.14 | \$15.55 | 2.52 | -4.98 |
| Inpatient Spending PMPM | ↓ | \$55.95 | \$58.49 | 1.09 | -19.41 |
| Primary Care Spending PMPM | | \$20.50 | \$22.80 | 0.79 | -8.62 |

Significant worsening < from baseline
Significant improvement > from baseline
No significant change from baseline (p>0.05)

25% 10% 0% 10% 25%

↓ Lower is better
\$ CCO Incentive Measure
☀ State Quality Measure

As shown in Table 6.1, among claims-based measures, there was relatively little change in primary care access, whereas ED utilization decreased. Changes in survey-based, self-reported measures were mixed. The percentage of people who rated their health care at least 8 out of 10 increased slightly, whereas increases in enrollees who said they could get care when they needed it or get the care they needed were not statistically significant. On the other hand, the percentage of members who rated their overall health as good, very good, or excellent decreased slightly, although this change was also not statistically significant.

Between 2016 and 2019, spending on primary care services increased slightly. Total spending and ED spending increased considerably between 2016 and 2019. As described in Appendix B, spending measures were calculated using imputed values for services subject to capitation arrangements. Our results for these measures therefore are closer to a summary measure of utilization rather than actual CCO expenditures. Furthermore, results for primary care spending may not match the values in OHA's Primary Care Spending in Oregon report, because we used different methodologies and definitions.

Limitations

Qualitative interviews were limited to a single hour with each CCO, which restricted the team's ability to probe in detail into specific aspects of HRS provision, as well as the ability of individual CCO respondents to speak privately and at greater length. We conducted interviews prior to completing Exhibit L quantitative analyses and therefore were not able to ask detailed questions about reported expenditures. Interviews did not capture perspectives of CCO members seeking or receiving services, or of community partners helping CCOs deliver them. The second round of HRS interviews for the summative evaluation will include this additional content. Interviews were carried out before OHA held webinars on HRS and Supporting Health for All through Reinvestment (SHARE) requirements in late 2020/early 2021; CCOs' strategies for using HRS and addressing SDOH may have changed due to that guidance.

The HRS spending analyses presented here are preliminary and should be cautiously interpreted. Exhibit L data were missing for Trillium in 2014-2015. Some CCOs continue to fund the majority of SDOH work through non-HRS mechanisms. The years 2014-17 reflect all reported spending, whereas 2018-19 data show approved spending only. Additionally, reporting requirements and practices have evolved considerably over time and were subject to different interpretations, limiting comparability across years and CCOs.

Furthermore, we were not able to link HRS spending to individual outcomes to assess the impact of HRS on quality and cost. More granular data from Exhibit L should facilitate more detailed analyses for the summative evaluation. Finally, Table 6.1 displayed broad trends in quality and costs. We were unable to provide information about how these changes may have improved or worsened across different racial and ethnic groups.

Conclusions

Three conclusions emerged from evaluation of HRS:

- 1. CCOs have prioritized SDOH and increased their spending on HRS.** Changes by the state with the waiver renewal and as part of the CCO 2.0 contracting have focused CCOs' efforts to address SDOH and expanded spending on HRS. However, at 0.36% of member services spending in 2019, HRS remains a small fraction of CCOs' total spending.
- 2. CCOs are still learning how to use HRS.** The use of HRS is still new to CCOs, even as many have established "anchor partners" and identified paths for outreach and coordination. As of yet, CCOs have relatively little ability to robustly assess the effectiveness of their expenditures.
- 3. The use of HRS creates opportunities for CCOs but also carries a significant administrative burden.** HRS entails new data, relationships, and reporting requirements, all of which create a notable administrative burden on CCOs. In some cases, the burden may be large enough to deter accurate reporting or impede more expansive spending.

Chapter 8 includes recommendations for HRS and SDOH activities.

Dual-Eligible Members

Overview

In 2019, approximately 13% of OHP members were simultaneously enrolled in both Medicare and Medicaid benefits (“dual-eligible members”). That year, Oregon introduced passive enrollment in CCOs for dual-eligible members as part of the state’s commitment under the waiver renewal to expand access to coordinated care for these individuals. Prior to 2019, dual-eligible members were enrolled in FFS coverage by default but could choose to enroll in a CCO (an “opt-in” model). Under passive enrollment, dual-eligible members were enrolled in a CCO by default but given the option to “opt-out” and return to FFS at any time. This chapter examines the state’s progress on providing high-quality, cost-effective, and person-centered care for dual-eligible members. We first provide background on the characteristics of this population and their coverage under Medicare and Medicaid. We then review the passive enrollment provisions of the 2017-2022 waiver and describe Oregon’s implementation of these provisions. Finally, we present evaluation measures related to quality, access and spending for dual-eligible members using data through 2018, showing changes over time and stratifying by geography. Measures address the following evaluation hypotheses:

- 4.1 The proportion of dual-eligible members enrolled in a CCO will increase compared with past demonstration levels without loss of member satisfaction.
- 4.2 CCO enrollment will encourage appropriate use of clinical resources and ancillary care for dual-eligible members.

KEY FINDINGS

- Results for measures of health care access, quality, and spending for dual-eligible members were mixed in the first two years of the waiver renewal. Our analyses used data through 2018 and therefore did not capture any impact of dual-eligible members’ passive enrollment in CCOs, which was implemented starting in 2019.
- Outpatient visits increased among dual-eligible members, particularly for behavioral health, whereas access to primary and preventive care were relatively flat. Declines in ED utilization and avoidable ED visits were limited to dual-eligible members residing in urban areas.
- Total spending increased somewhat between 2016 and 2018 for dual-eligible members in isolated and rural areas.
- Overall, results for evaluation measures indicate that care for dual-eligible members did not change substantially from 2016 to 2018. Future analyses will assess the impacts of passive CCO enrollment occurring in 2019.

Background

Dual-eligible members represent a unique segment of the Medicaid population. They are among the most economically and socially vulnerable Medicaid members. Compared to other members,

they have a higher prevalence of chronic physical health conditions and co-occurring behavioral health conditions. Many have long-term care needs and social risk factors. Spending on dual-eligible members represents a disproportionate share of total Medicaid spending. Nationally, they account for 15% of Medicaid enrollees but 32% of Medicaid expenditures; in the Medicare program, they account for 20% of enrollees and 34% of Medicare expenditures.²³

Dual-eligible individuals may qualify for Medicare based on age (65 years or older) or because they have a disability or end-stage renal disease. In Oregon, about 57% of dual-eligible members are aged 65 or older, whereas 43% qualify through disability (based on data from the fourth quarter of 2018). The latter group includes individuals who qualify for Social Security disability benefits due to SPMI. Medicare pays for all Medicare-covered services (including most preventive, primary, and acute health care services and prescription drugs). Medicaid pays for any services that Medicare does not cover, including Medicare premiums and cost sharing (deductibles, coinsurance and copayments), long-term services and supports, and certain behavioral health services, including behavioral health services obtained from provider types not eligible for Medicare enrollment. Some dual-eligible members qualify only for partial Medicaid benefits; coverage for these members is limited to expenses related to payment of Medicare premiums and cost sharing.²⁴ Full-benefit dual eligible (FBDE) members receive Medicare benefits outside of Part D prescriptions in addition to payment of Medicare premiums and cost-sharing. Only FBDE members may be enrolled in a CCO. Box 7.1 describes the potential for greater alignment between Medicaid and Medicare programs to improve care for dual-eligible members.

Box 7.1: Medicare & Medicaid Plan Alignment

Given the high prevalence of chronic physical and behavioral health conditions among dual-eligible members, care integration and coordination under the CCO model has strong potential to improve outcomes for this population. However, CCOs may have weaker incentives to address the specific needs of dual-eligible individuals compared to other member populations. Since Medicare acts as the primary payer, any cost savings from care coordination and integration for dual-eligible members (for example, resulting from reduced ED visits) are likely to benefit Medicare. As secondary payers, CCOs may also lack information about dual-eligible members' health care utilization, further limiting their ability to coordinate and manage care.

A 2018 study of dual-eligible members enrolled in Oregon CCOs analyzed outcomes among CCOs that also offered Medicare Advantage (MA) plans. In these cases, the CCO bears financial risk for both Medicaid and Medicare programs. Dual-eligible individuals served by these "aligned" plans experienced more improvement in health and quality of care outcomes compared to members whose plans were not aligned. Dual-eligible members with aligned plans also had lower emergency department visit and hospitalization rates, higher primary care visit rates, and were more likely to receive diabetes and cholesterol screening.

Under CCO 2.0, OHA is requiring that all CCOs offer aligned MA plans, through affiliation agreements, and provide integrated care and processes for FBDE members. CCOs are also required to contact their FBDE members annually to inform them of the opportunity to align their Medicaid and Medicare benefits. The interim evaluation uses data through 2018 and therefore does not assess how these changes may have affected outcomes for dual-eligible members.

References:

Kim, H., Charlesworth, C. J., McConnell, K. J., Valentine, J. B., & Grabowski, D. C. (2019). Comparing Care for Dual-Eligibles Across Coverage Models: Empirical Evidence From Oregon. *Medical Care Research and Review*, 76(5), 661–677. <https://doi.org/10.1177/1077558717740206>

The 2012-2017 Waiver

Under Oregon's 2012-2017 waiver, dual-eligible members were enrolled in FFS Medicaid by default but could choose to "opt-in" to CCO enrollment. When the CCO model was first implemented in 2012, most dual-eligible members previously enrolled in managed care became enrolled in a CCO. CCOs were encouraged to pursue alignment or affiliation agreements with MA plans to better coordinate care for dual-eligible members. However, not all CCOs held MA contracts, and the amount of alignment between MA plans and Medicaid CCOs varied regionally.

A 2016 study used Medicare and Medicaid claims data to examine the effects of CCO implementation on health care utilization and quality among Oregon's dually eligible population. The study found that the introduction of CCOs led to some improvements in quality of care for dual-eligible members with diabetes, although there were no meaningful improvements in utilization.²⁵ The study did not explore differences in outcomes for dual-eligible members served by aligned MA plans (e.g., whose CCO also managed their MA benefits) and those who were not. A later study (referenced in Box 7.1) indicated that Oregon should consider opportunities to build alignment as a means of improving outcomes for dual-eligible members.

Auto-Enrollment Under the Waiver Renewal

Oregon's waiver renewal called out a "lack of clarity about local care delivery opportunities and choices" for dual-eligible members.²⁶ To simplify coverage and choices for dual-eligible members, individuals were to be provided an option to opt-out of being automatically enrolled in a CCO via passive enrollment. Enrollment changes were subject to the following requirements:²⁷

1. Dual-eligible members must receive a 90-day notice regarding passive enrollment in a CCO.
2. Dual-eligible members residing in an area with two CCOs would be enrolled using the same process as other OHP members (e.g., based on previous enrollment, enrollment of other family members, and CCO area capacity limits).
3. Dual-eligible individuals enrolled in a dual-eligible special needs plan (D-SNP) would be assigned to the affiliated CCO. Additionally, dual-eligible members enrolled in a MA plan would be assigned to the affiliated CCO.
4. Dual-eligible members who did not opt-out initially would have the continued option to opt-out and return to FFS at any time.

Passive enrollment provisions were codified in OAR 410-141-3060, effective January 1, 2019.²⁸ In 2019, partnering with ODHS, OHA began a phased regional implementation of passive enrollment for dual-eligible individuals. The phased approach was designed to ensure that member questions and concerns could be adequately addressed and that systems could be adapted in response to unforeseen challenges. In accordance with federal requirements, OHA sent letters to dual-eligible members prior to passive enrollment offering an opportunity to opt-out. Individuals could respond by phone or letter if they wanted to opt-out, and OHA sent a second notice to members who had not responded affirmatively. Partnering with ODHS, OHA trained customer service representatives to answer questions and assist dual-eligible members through the automated enrollment process.²⁹ In describing the implementation, OHA noted that (as of 2018) the majority of dual-eligible members enrolled in CCOs had remained enrolled and that these members were generally satisfied with their care. OHA emphasized the benefits of CCO enrollment for dual-eligible individuals, including access to wrap-around services, trauma-informed care, integrated behavioral and oral health care services, and preventive services.³⁰

Outcomes for Dual-Eligible Members

This section analyzes performance on the following outcome measures for dual-eligible members:

- **Percentage of Oregon Dual-Eligible Members Enrolled in CCOs:** Percentage of members who were dually eligible for Medicare and Medicaid services who were enrolled in a CCO at any time during the measurement year.
- **Members with Any Primary Care:** Percentage of members who were dually eligible for Medicare and Medicaid services who had at least one visit to a primary care provider.
- **Adults' Access to Preventive-Ambulatory Services:** Percentage of members who were dually eligible for Medicare and Medicaid services who had an outpatient or preventive care visit.
- **Outpatient Visits for Behavioral Health Care per 1,000 MM:** Number of outpatient visits for behavioral health care per 1,000 months of enrollment among members who were dually eligible for Medicare and Medicaid services.
- **Outpatient Visits for Non-Behavioral Health Care per 1,000 MM:** Number of outpatient visits for non-behavioral health care per 1,000 months of enrollment among members who were dually eligible for Medicare and Medicaid services.
- **ED Utilization per 1,000 MM:** Number of ED visits per 1,000 months of enrollment among members who were dually eligible for Medicare and Medicaid services.
- **Potentially Avoidable ED Visits:** Number of ED visits that were preventable or treatable with appropriate primary care per 1,000 months of enrollment among members who were dually eligible for Medicare and Medicaid services.
- **30-Day Plan All-Cause Readmissions:** Percentage of hospital stays with unplanned readmissions to the hospital within 30 days among members who were dually eligible for Medicare and Medicaid services.
- **Total Spending PMPM:** Total spending for members who were dually eligible for Medicare and Medicaid services divided by months of enrollment.

The study population includes dual-eligible members enrolled in CCOs or in FFS Medicaid. We present results for the period 2013 through 2018, including changes from two baseline periods – 2013 and 2016 – adjusted for demographic characteristics and risk. We report results for subgroups based on geography of residence (rural, urban, and isolated). Isolated geographies are defined as population centers of less than 2,500 without commuting flow to urban areas.

Figure 7.1 displays the rate of CCO enrollment among dual-eligible members from 2013 through 2018. Enrollment in CCOs increased in 2013-2015, leveling out at 38% and declining slightly to 36% by 2018. These numbers are not directly comparable to OHA's reporting of CCO enrollment rates for dual-eligible members, because we did not have data to exclude non-FBDE members (who are not eligible for CCO enrollment). Figures 7.2 through 7.9 display unadjusted trends in measures of access, quality, and spending among dual-eligible members. The percentage of dual-eligible members accessing primary care and preventive-ambulatory services was relatively flat. Outpatient visits for behavioral health increased steadily from 2014, and outpatient visits for non-behavioral health care trended upwards in 2018 after remaining relatively unchanged since 2014. Avoidable ED visits decreased from 2016 to 2018, although readmissions increased slightly from 2017 to 2018. Total PMPM spending for dual-eligible members increased considerably from 2013 to 2015, followed by a smaller increase in 2017.

Figure 7.1: Percentage of Oregon Dual-Eligible Members Enrolled in CCOs

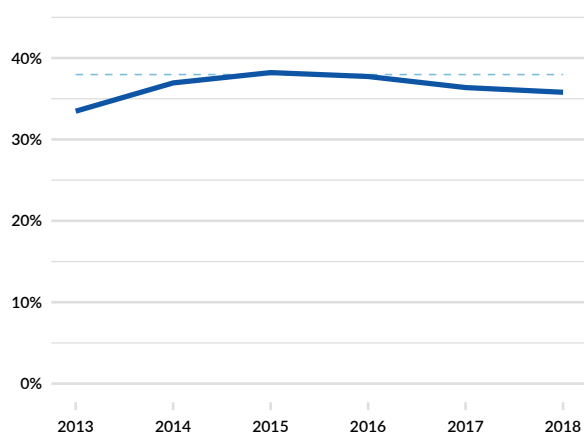


Figure 7.2: Percentage of Dual-Eligible Members with Any Primary Care

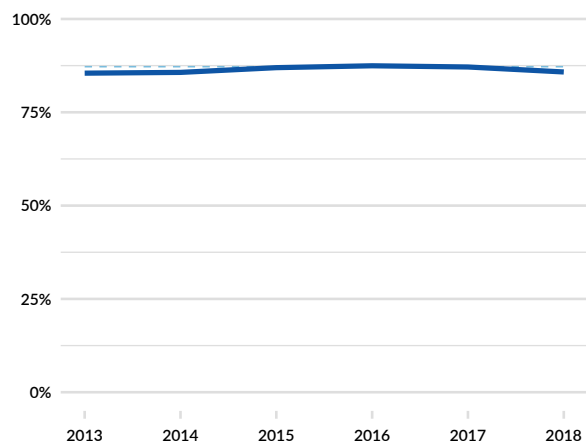
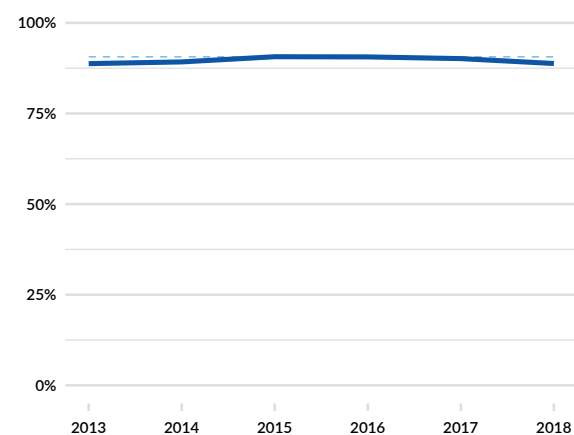


Figure 7.3: Adult Dual-Eligible Members' Access to Preventive-Ambulatory Services



--- 2015-2016 mean

Figure 7.4: Dual-Eligible Members' Outpatient Visits for Behavioral Health Care per 1,000 MM

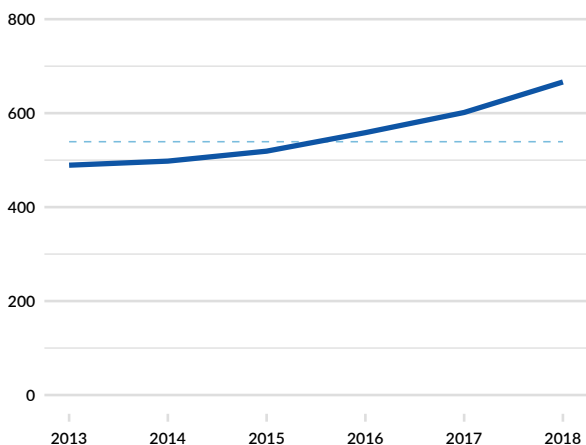


Figure 7.5: Dual-Eligible Members' Outpatient Visits for Non-Behavioral Health Care per 1,000 MM

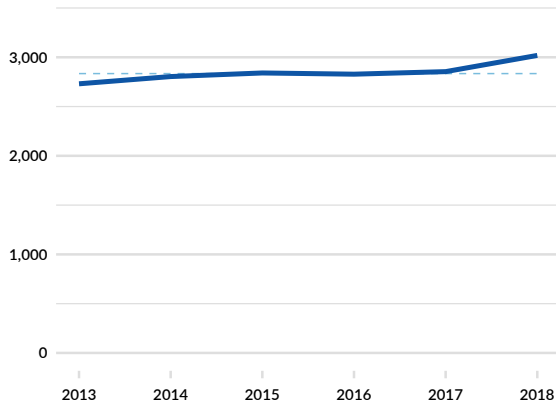


Figure 7.6: Dual-Eligible Members' ED Utilization per 1,000 MM (↓ \$ ☼)

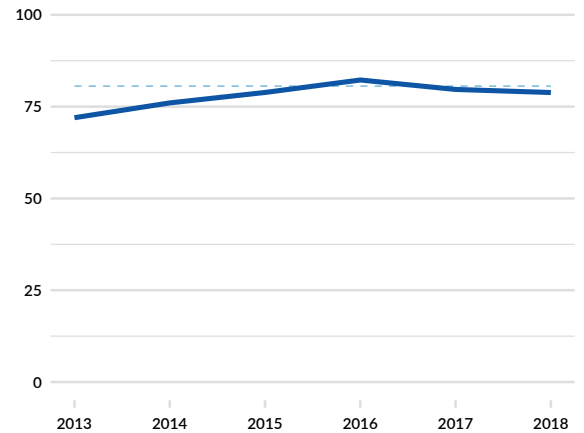


Figure 7.7: Dual-Eligible Members' Potentially Avoidable ED Visits per 1,000 MM (↓ ☼)

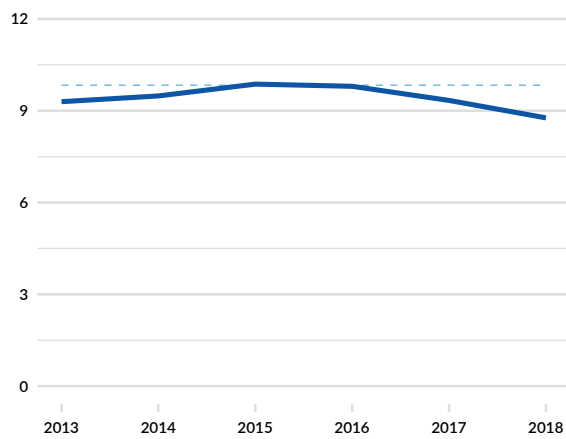
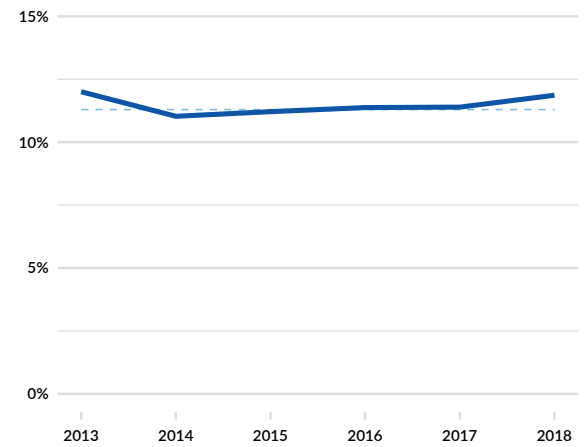


Figure 7.8: Dual-Eligible Members' 30-day Plan All-Cause Readmissions (↓ ☼)



— 2015-2016 mean
 ↓ Lower is better
 \$ CCO Incentive Measure
 ☼ State Quality Measure

Figure 7.9: Total Spending PMPM for Dual-Eligible Members (↓)

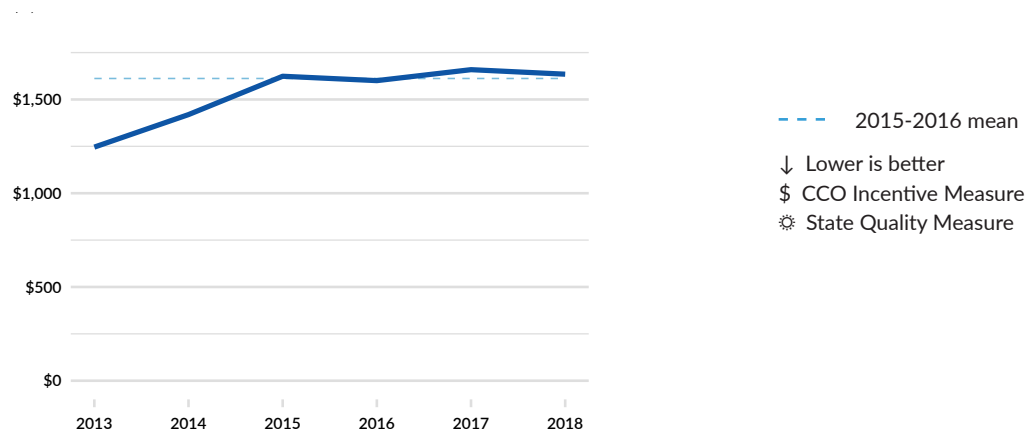


Table 7.1 summarizes changes from 2013 and 2016 baselines to 2018, adjusting for demographics and risk. The percentage of dual-eligible members accessing primary care and preventive-ambulatory services did not change meaningfully between 2016 and 2018. Outpatient visits for behavioral health care increased by 117 visits per 1,000 member months from 2016 to 2018. Avoidable ED visits declined slightly from 2016 to 2018, whereas the decline in overall ED utilization was not statistically significant. After adjusting for demographics and risk, the change in all-cause readmissions was not statistically significant. Total spending for dual-eligible members increased by \$37 PMPM between 2016 and 2018, representing an annualized growth rate of 1.2%.

Table 7.1 Adjusted Change in Outcome Measures for Dual-Eligible Members, 2013-2018 and 2016-2018

| Measure | | 2016 | 2018 | Adj. Change 2016-2018 | Adj. Change 2013-2018 |
|---|--------|------------|------------|-----------------------|-----------------------|
| Adults' Access to Preventative-Ambulatory Services | | 0.9% | 0.9% | -0.01 | 0.01 |
| Potentially Avoidable ED Visits per 1,000 MM | ↓ ☼ | 9.8 | 8.8 | -0.8 | 0.4 |
| ED Utilization per 1,000 MM | ↓ \$ ☼ | 82.2 | 78.8 | -1.2 | 15.6 |
| Outpatient Visits for Behavioral Health Care per 1,000 MM | | 558.5 | 666.4 | 116.8 | 187.4 |
| Outpatient Visits for Non-Behavioral Health Care per 1,000 MM | | 2828.4 | 3018.8 | 238.0 | 571.2 |
| Members with Any Primary Care | | 0.9% | 0.9% | -0.01 | 0.01 |
| 30-Day Plan All-Cause Readmissions | ↓ ☼ | 0.1% | 0.1% | 0.004 | -0.0003 |
| Total Spending PMPM | ↓ | \$1,600.46 | \$1,634.79 | 37.28 | 396.48 |

Significant worsening < from baseline
Significant improvement > from baseline
No significant change from baseline (p>0.05)

25% 10% 0% 10% 25%

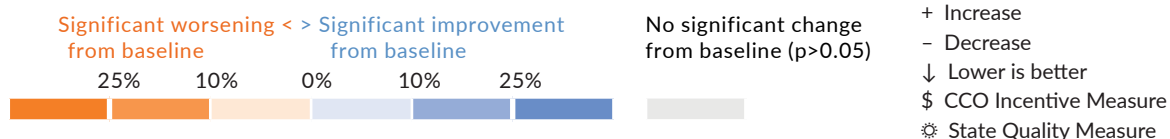
↓ Lower is better
 \$ CCO Incentive Measure
 ☼ State Quality Measure

Table 7.2 displays changes from 2016 to 2018 separately for residents of urban, rural, and isolated areas. Outpatient visits increased for all subgroups, with outpatient behavioral health visits increasing more in urban and isolated areas. Access to primary care and preventive services declined slightly for dual-eligible members in rural and urban areas. Avoidable ED visits and ED utilization declined significantly for dual-eligible members in urban areas but were statistically unchanged in rural and isolated areas. Increases in PMPM spending were statistically significant only in isolated and rural areas, with relatively greater spending increases for dual-eligible members in isolated areas

Table 7.2: Adjusted Change from 2016 to 2018 in Outcome Measures for Dual-Eligible Members, by Geography of Residence

| Measure | | Geography of Residence | | |
|---|--------|------------------------|-------|----------|
| | | Rural | Urban | Isolated |
| Adults' Access to Preventative-Ambulatory Services | | - | - | - |
| Potentially Avoidable ED Visits per 1,000 MM | ↓ ☀ | - | - | - |
| ED Utilization per 1,000 MM | ↓ \$ ☀ | + | - | + |
| Outpatient Visits for Behavioral Health Care per 1,000 MM | | + | + | + |
| Outpatient Visits for Non-Behavioral Health Care per 1,000 MM | | + | + | + |
| Members with Any Primary Care | | - | - | - |
| 30-Day Plan All-Cause Readmissions | ↓ ☀ | + | + | + |
| Total Spending PMPM | ↓ | + | + | + |

Note: Isolated areas were defined as population centers of less than 2,500 without commuting flow to urban areas.



Limitations

The results presented here should be considered in the context of several limitations. First, the analysis is based on a “pre-post” design, comparing changes before and after the waiver renewal. With this approach, we cannot separate changes that could be attributed to Oregon’s policies from secular changes occurring across the health care system. Furthermore, analyses that rely on a short pre- or post-period could be biased if those years are outlier years and not representative of general trends. Second, our analyses should be seen as an assessment of overall progress on providing high-quality, cost-effective, and person-centered care for dual-eligible members. We did not evaluate the merits of specific evidence-based practices or approaches that CCOs may have undertaken to improve care for dual-eligible members. Third, these results reflect data through 2018 and therefore do not capture the impact of dual-eligible members’ passive enrollment in CCOs, implemented in 2019, or new requirements for MA plan alignment under CCO 2.0. Fourth, we did not assess differences in outcomes between CCO-enrolled and FFS dual-eligible members, nor did we examine differences for CCO members enrolled in aligned versus non-aligned plans. Fifth, to calculate spending measures, we used imputed values for services subject to capitation arrangements (see

Appendix B for details). Our spending measure results can be considered a proxy measure of utilization rather than actual Medicare and Medicaid expenditures. Finally, in calculating the rate of enrollment of dual-eligible members in CCOs, we were unable to exclude members for whom Medicaid covers only Medicare premiums (“partial” dual-eligible members) or individuals participating in Oregon’s Program of All-Inclusive Care for the Elderly, who are not eligible for enrollment in a CCO.

Conclusions

Changes in health care access, quality, and spending for dual-eligible members were mixed in the first two years of the waiver renewal. Outpatient visits increased, particularly for behavioral health, whereas access to primary and preventive care were relatively flat. Significant decreases in ED utilization and avoidable ED visits were limited to dual-eligible members residing in urban areas. Total spending increased somewhat between 2016 and 2018 for residents of isolated and rural areas. Overall, care for dual-eligible members did not seem to change substantially from 2016 to 2018. Future analyses should assess the impacts of passive enrollment in CCOs and new requirements for MA plan alignment under CCO 2.0.

Recommendations

Overview

This chapter presents recommendations and considerations for the duration of the 2017-2022 waiver and beyond. The recommendations are based on our assessment of performance and activities described in the preceding chapters, factoring in OHA's strategic goal of eliminating health inequities by 2030. Overall, there are signs of progress in the areas of oral health integration and health-related services. However, behavioral health integration is an area of concern. There is opportunity in all areas to better integrate health equity.

Behavioral Health Integration

Our evaluation of Oregon's efforts in behavioral health integration – a cornerstone of the CCO model since 2012 – suggests considerable work may still be necessary to achieve the promise of integrated physical and behavioral health.

Recommendation 1. Provide a strategic plan for how behavioral health integration will be achieved and what milestones should serve as indicators for progress, especially for communities most impacted by health inequities. The evaluation team found it difficult to discern what activities or populations CCOs are expected to prioritize, how integration will be measured, or what the future state should look like.

Recommendation 2. Reconsider the way accountability for behavioral health is shared or assigned within and outside of OHA. The state should investigate where roles may be unclear and consider options for providing clarity. Oregon is undertaking a range of activities and laws that touch on behavioral health, including new legislation that could potentially transform substance use treatment, efforts to address the intersection of homelessness and mental health, a new 1115 SUD Waiver, and the need to address a growing number of civil commitments and "Aid and Assist" patients. It will be important to coordinate these activities to ensure that funds are deployed effectively and efficiently, that OHA staff and stakeholders outside of OHA have a clear understanding of these disparate activities, and that the efforts have the greatest potential for improving public health. The 2019 appointment of Steve Allen as the state's new Behavioral Health Director offers an opportunity to reduce ambiguity about who is responsible or empowered to facilitate change. The state should also consider the value of a behavioral health ombuds to collect input about where integration efforts are falling short.

Recommendation 3. Consider the needs of multiple populations and systems of care, particularly for communities most impacted by health inequities. The state's approach to behavioral health integration is broad and comprehensive. While this approach has merit, there may be benefits to more consideration of specific populations' needs. The needs of adults with behavioral health conditions may be substantially different than the needs of children with serious emotional disorders. Additionally, adults with serious mental illness may require specialty care. In contrast, adults with mild to moderate behavioral health issues may stand to gain the most from behavioral health integration at the primary care site. Optimal models of care might look considerably different in urban and rural areas. Furthermore, given the well documented impact of racism on health and the

existing racial and ethnic disparities in behavioral health services, OHA should consider efforts that specifically target the intersection of equity and behavioral health.^{31, 32, 33, 34, 35, 36, 37}

Oral Health Integration

Recommendation 4. Continue progress in oral health integration. The evaluation focused on changes in claims-based measures; it did not assess potential challenges in oral health care delivery which would not be captured by these measures. Overall, claims- and survey-based measures suggested that access to services and the quality of oral health care has improved. The state should continue to build on these apparent successes.

Recommendation 5. OHA is currently hiring for a new Dental Director. This transition to new leadership provides an opportunity to redouble efforts initiated through the 2016 Oral Health Roadmap process to strengthen communication and coordination across OHA on oral health, build a shared definition of oral health integration that aligns with the goal to end health inequities, define milestones for delivery system and financial integration, and organize the agency's activities strategically to achieve these milestones.

Health-Related Services

Recommendation 6. Continue refining guidance on reporting of HRS expenditures to promote consistency across CCOs. Some of the differences in reported spending on HRS appear to be related to definitions instead of real differences in investments in HRS or SDOH.

Recommendation 7. Assess the balance between data needs and the administrative and financial burden associated with collecting and reporting HRS data. OHA will need data to evaluate impacts of HRS activities and verify that spending meets requirements under the waiver. However, these needs should be balanced against the increased administrative demands on CCOs and their contracted community partners, which may be disproportionately felt by communities most impacted by health inequities. Refining the guidance on HRS expenditures and promoting consistency across CCOs may be helpful here. Additional technical assistance may be another avenue for identifying opportunities to collect high quality data while limiting the reporting burden on CCOs.

Recommendation 8. Continue to develop the evidence base for HRS and investments in SDOH. The evidence for effective programs and investments in SDOH is still nascent and largely conceptual, particularly as it applies to the Medicaid population. An evidence summary by the Commonwealth Fund assessed 56 studies and rated only 14 of them as providing "strong" evidence,³⁸ with some positive and promising results in housing and nutrition. In contrast, a recent meta-analysis of 38 randomized trials of social policy interventions found that early life and income-based interventions held potential.³⁹ However, the study did not find positive effects associated with housing and neighborhood interventions. These studies suggest that evidence about which programs work – and when – is still at a formative stage. The effectiveness of interventions may be highly dependent on the population and the design of the intervention. Oregon can play an important role in providing robust, credible evidence, which will help shape programs within the state and beyond.

Recommendation 9. Identify areas where housing capacity or community resources restrict CCOs' ability to affect SDOH. Oregon's MAC identified housing-related services and supports as a top priority for CCOs and HRS spending. However, in some areas, housing shortages and the lack of affordable options may create significant challenges in helping enrollees obtain stable housing. OHA should assess opportunities to address houselessness broadly – including opportunities to weave or

braid funding from multiple sources to create larger systems-based approaches. Finally, the goals of improved health and reductions in houselessness may be incompatible with regulations and norms that restrict the supply of housing. OHA should assess whether HRS spending is the most effective way to address these issues, or whether, for example, it may be more effective to address policies outside of health care (e.g., zoning) or cultural norms (e.g., preferences for historical neighborhood attributes and concerns for property values).

Health Equity

Recommendation 10. In addition to “health equity,” state rules and guidance documents use equity-related terms such as “social determinants of equity” (SDOE), and “social determinants of health and equity” (SDOH-E). Each of these has a different application and definition, but the nuances may be lost to a larger audience. Further separation and articulation of the meaning of these terms would reduce the risk of confusion and conflation of priorities.

Recommendation 11. Health equity has been identified by OHA leadership as a clear priority, adopting a 10-year goal to eliminate health inequities by 2030. This requires engagement with communities most impacted by health inequities to prioritize initiatives and interventions. Current data systems limit the state’s ability to achieve this, due to a lack of information on race and ethnicity. OHA should continue to support CCOs in collecting REALD data and ensure that resources are available to manage and maintain these data. In addition, to track progress, OHA should monitor and report on the percentage of members for whom REALD data are collected.

Dual-Eligible Members

Recommendation 12. The waiver renewal aims to simplify coverage and choices for beneficiaries who are dually eligible for Medicare and Medicaid through passive enrollment in CCOs, with the option to opt-out and return to the state’s FFS program at any point in time. The waiver evaluation is intended to assess the impacts of these changes on the dually eligible population. However, the most recent data available for this interim evaluation covered 2018, and we were therefore unable to assess effects of the transition to passive enrollment, which occurred in 2019. Future evaluation work should assess changes associated with the introduction of this policy.

Recommendation 13. CCO 2.0 introduced new requirements intended to increase enrollment of dual-eligible members in MA plans provided by (or affiliated with) their CCO. Research suggests that such “alignment” of Medicare and Medicaid plans may contribute to improved outcomes. To assess whether this occurs and inform future policy development, OHA should consider monitoring rates of enrollment of dual-eligible members in aligned plans over time and tracking outcomes for dual-eligible members enrolled in aligned versus non-aligned plans.

Measure Definitions

Behavioral Health Integration

H1.1: Coordination of care for CCO members with behavioral health diagnoses will improve

ED Utilization per 1,000 MM for Members with Behavioral Health Conditions

Formal Name: Ambulatory Care: ED Utilization per 1,000 MM for Members with SPMI and SUD
 Description: Number of emergency department visits by members with severe and persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), reported per 1,000 member months
 Source: Medicaid Claims
 Steward: NCQA (HEDIS 2016)

Potentially Avoidable ED Visits per 1,000 MM for Members with Behavioral Health Conditions

Description: Number of emergency department visits with a diagnosis indicating they were preventable or treatable with appropriate primary care, for members with severe persistent mental illness and/or substance use disorder diagnoses, reported per 1,000 member months; reported separately for members age 1 to 17 and 18 and over
 Source: Medicaid Claims
 Steward: Medi-Cal

Glucose Testing for People Using 2nd Gen. Antipsychotic Medications

Formal Name: Glucose Testing for People Using Second Generation Antipsychotic Medications
 Description: Percentage of members age 18 to 64 with a filled prescription for second-generation antipsychotic medication in the prior year who had at least one HbA1c test performed within 180 days of last prescription fill
 Source: Medicaid Claims
 Steward: CHSE (based on a measure developed by RAND Corporation for the Veterans Administration)

Lipid Testing for People Using 2nd Gen. Antipsychotic Medications

Formal Name: Lipid Testing for People Using Second Generation Antipsychotic Medications
 Description: Percentage of members age 18 to 64 with a filled prescription for second-generation antipsychotic medication in the prior year who had at least one LDL-C screening performed within 180 days of last prescription fill
 Source: Medicaid Claims
 Steward: CHSE (based on a measure developed by RAND Corporation for the Veterans Administration)

30-Day Follow-Up after Hospitalization for Mental Illness

Description: Percentage of discharges from a hospital after a member was hospitalized for mental illness in which the member received follow-up from a health care provider within 30 days of discharge
 Source: Medicaid Claims
 Steward: NCQA (HEDIS 2016)

H1.2: Ability to identify and refer members to substance abuse interventions will improve over time

Engagement of AOD Dependence Treatment, 13-64 years

Formal Name: Engagement of Alcohol or Other Drug Dependence Treatment, 13-64 years

Description: Percentage of members age 13 and over diagnosed with alcohol or drug dependence who started treatment, and who received at least two services for alcohol or other drug abuse within 30 days of starting treatment

Source: Medicaid Claims

Steward: NCQA (HEDIS 2016)

Initiation of AOD Dependence Treatment, 13-64 years

Formal Name: Initiation of Alcohol or Other Drug Dependence Treatment, 13-64 years

Description: Percentage of members age 13 and over diagnosed with alcohol or drug dependence who started treatment within 14 days of the diagnosis

Source: Medicaid Claims

Steward: NCQA (HEDIS 2016)

Screening, Brief Intervention, and Referral to Treatment

Description:

Rate 1: Percentage of members 12 years and older who received an age-appropriate screening for alcohol or other substance abuse

Rate 2: Percentage of members who screened positive for alcohol or other substance abuse and received a brief intervention or referral to treatment.

Source: CHSE used a summarized data extract from OHA to calculate this measure

Steward: OHA (2014)

Percentage of Members with SUD

Description: Percentage of members with 2 or more substance use disorder claims in a 2 year period, based on the NCQA HEDIS definition of AOD dependence. AOD includes abuse of alcohol, opioids, cannabis, cocaine, amphetamines, hallucinogens, anti-depressant drugs, or a sedative-, hypnotic- or anxiolytic-related disorder, or the onset of delirium tremens.

Source: Medicaid Claims

Steward: CHSE

H1.3: Integration of behavioral health services will improve access for CCO members with severe mental illness

Outpatient Visits for Behavioral Health Care per 1,000 MM

Description: Number of outpatient visits for behavioral health care, reported per 1,000 member months among members with severe and persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions)

Source: Medicaid Claims

Steward: CHSE

Outpatient Visits for Non-Behavioral Health Care per 1,000 MM

Description: Number of outpatient visits for non-behavioral health care, reported per 1,000 member months among members with severe and persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions)

Source: Medicaid Claims

Steward: CHSE

Members with Any Primary Care for Members with Behavioral Health Conditions

Formal Name: Members with Any Primary Care for Members with SPMI and SUD

Description: Percentage of members with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), who received any primary care during the measurement year

Source: Medicaid Claims

Steward: CHSE

Adults' Access to Preventive-Ambulatory Services for Members with Behavioral Health Conditions

Formal Name: Adults' Access to Preventive-Ambulatory Services for Members with SPMI and SUD

Description: Percentage of adults with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions) who had an outpatient or preventive care visit in the measurement year; reported separately for adults age 20-44 and 45-64, and 65 and over

Source: Medicaid Claims

Steward: NCQA (HEDIS 2016)

H1.4: Integration of behavioral health services with physical health services will be associated with reduced growth of total spending and spending in high-cost settings (e.g., ED and inpatient), and with sustained or increased spending on primary or preventive care, for CCO members with behavioral health diagnoses**Primary Care Spending PMPM for Members with Behavioral Health Conditions**

Formal Name: Primary Care Spending Per Member, Per Month for Members with SPMI and SUD

Description: Total spending on primary care services (excluding behavioral health services) for members with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

ED Spending PMPM for Members with Behavioral Health Conditions

Formal Name: Emergency Department Spending Per Member, Per Month for Members with SPMI and SUD

Description: Total spending on emergency department services (excluding behavioral health services) for members with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Inpatient Facility Spending PMPM for Members with Behavioral Health Conditions

Formal Name: Inpatient Facility Spending Per Member, Per Month for Members with SPMI and SUD

Description: Total inpatient facility spending (excluding behavioral health services) for members with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Inpatient Professional Spending PMPM for Members with Behavioral Health Conditions

Formal Name: Inpatient Professional Spending Per Member, Per Month for Members with SPMI and SUD

Description: Total inpatient professional spending (excluding behavioral health services) for members with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Total Spending PMPM for Members with Behavioral Health Conditions

Formal Name: Total Spending Per Member, Per Month (CHSE) for Members with SPMI and SUD

Definition: Total spending on emergency department, primary care, prescription drug, inpatient, behavioral health, and other outpatient spending for members with severe persistent mental illness and/or substance use disorder diagnoses (see Appendix B for definitions), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Oral Health Integration

H2.1: Emergency dental visits for non-traumatic dental reasons will reduce over time for CCO enrollees

ED Visits for Traumatic Dental Conditions per 1,000 Members

Description: Number of ED visits in a calendar year, reported per 1,000 members, with the following discharge diagnosis codes: 52511, 8300-1, 8481, 87343-4, 87349-54, 87359-65, 87369-75, 87379, K062, K08419, S030XXA, S01409A, S034XXA, S01501A, S01409A, S0180XA, S0993XA, S01429A, S0182XA, AS01521A, S01422A, S0182XA, S01502A, S01512A, S025XXA, S025XXB, S01512A, S01522A. These codes were drawn from the Association of State & Territorial Dental Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

ED Visits for Non-Traumatic Dental Conditions per 1,000 Members

Description: Number of ED visits in a calendar year, reported per 1,000 members, with the following discharge diagnosis codes: 5200-9, 52100-25, 52130-5, 52140-2, 52149, 5215-29, 52300-1, 52310-1, 52320-5, 52330-3, 52340-2, 5235-6, 5238-9, 52400-12, 52419-39, 5244, 52450-76, 52479, 52481-2, 52489, 5249-50, 52510, 52512-13, 52519-26, 5253, 52540-44, 52550-54, 52560-67, 52569, 52571-73, 52579, 5258-65, 52661-3, 52669, 52681, 52689, 5269-79, 52800-2, 52809, 5281-6, 52871-2, 52879, 5288-96, 5298-99 78492, 7924, V523, V534, V585, V722-3, A690, K000-11, K023, K0251, K0261-3, K027, K029-37, K0381, K0389, K039-48, K0490, K0499-501, K0510-11, K0520-22, K0530-2, K0540, K055-6, K060-1, K080, K08101-4, K08109, K0820-26, K083, K08401-4, K08409, K08429, K08439, K08499, K0850-2, K08530-1, K0854-5, K0856, K0859, K088-91, K098, K110-1, K1120, K113-22, K1230-2, K1233, K1239, K130, K1321-2, K1323, K1329, K135, K1370, K1379, K140-6, K148-9, M2600-12, M2619-20, M26211-13, M26220-25, M2629-37, M2639, M264, M2650-7, M2659-63, M2669-74, M2679, M2681-2, M2689, M269, M271-3, M2749, M2751-3, M2759, M2761-3, M2769, M278-9, R682, R6884, R859, Z0120-1, Z463, Z464. These codes were drawn from the Association of State & Territorial Dental

Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

Note: Results for this measure are not directly comparable to those reported in CHSE's 2016 report on Oregon's dental integration. We used different criteria for continuous enrollment to determine members' inclusion in the measure and a different, less restrictive approach for identifying eligible ED visits.

H2.2: Access to oral health services and dental care will improve for CCO enrollees

Percentage of Members with at Least One Visit for Any Dental Procedure

Definition: Percentage of members who had a visit for any procedure with a procedure code from D0100 to D0999 or an ED visit for a traumatic or non-traumatic dental procedure identified using codes drawn from the Association of State & Territorial Dental Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

Percentage of Members with at Least One Visit for Core Dental Procedures

Definition: Percentage of members who had a visit for any of the following common dental procedures - "D0120" Periodic oral exam, "D0150" Comprehensive oral exam, "D0210" Complete X-rays, "D0272" Bitewing X-rays, "D0330" Panoramic X-rays, "D1120" Child prophylaxis, "D1203" Application of topical fluoride, "D2331" Anterior tooth resin, "D2150" Permanent tooth amalgam, "D2751" Porcelain crown, "D2930" Prefabricated steel crown, "D3220" Therapeutic pulpotomy, "D3310" Root canal, "D7110" Extraction

Source: Medicaid Claims

Steward: CHSE

Number of Visits for Any Dental Procedure per 1,000 Members

Definition: Number of visits in a calendar year, reported per 1,000 members, with a procedure code from D0100 to D0999 or an ED visit for a traumatic or non-traumatic dental procedure identified using codes drawn from the Association of State & Territorial Dental Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

Number of Visits for Core Dental Procedures per 1,000 Members

Definition: Number of visits in a calendar year, reported per 1,000 members, for any of the following common dental procedures - "D0120" Periodic oral exam, "D0150" Comprehensive oral exam, "D0210" Complete X-rays, "D0272" Bitewing X-rays, "D0330" Panoramic X-rays, "D1120" Child prophylaxis, "D1203" Application of topical fluoride, "D2331" Anterior tooth resin, "D2150" Permanent tooth amalgam, "D2751" Porcelain crown, "D2930" Prefabricated steel crown, "D3220" Therapeutic pulpotomy, "D3310" Root canal, "D7110" Extraction

Source: Medicaid Claims

Steward: CHSE

Dental Sealants on Permanent Molars for Children

Definition: Percentage of children age 6-14 who received a sealant on a permanent molar in the measurement year

Source: Medicaid Claims

Steward: OHA, 2016

Percentage of Members with a Regular Dentist

Definition: Percentage of members who said they had a regular dentist they would go to for checkups and cleanings or when they have cavity or tooth pain

Source: CHSE used a summarized CAHPS Survey data extract from OHA to calculate this measure

Steward: CAHPS Health Plan

H2.3: Integration and coordination of oral health with other health services will improve for CCO enrollees

Assessments within 60 Days for Children in DHS Custody

Definition: Percentage of members aged zero to 17 years in custody of the Oregon Department of Human Services who received required physical, mental, and dental assessments

Source: Medicaid Claims

Steward: OHA, 2019

Percentage of Members with at Least One Visit for Any Dental Procedure for Members with a Chronic Condition

Definition: Percentage of members with a chronic condition diagnosis (see Appendix B for definition) who had a visit for any procedure with a procedure code from D0100 to D0999 or an ED visit for a traumatic or non-traumatic dental procedure identified using codes drawn from the Association of State & Territorial Dental Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

Percentage of Members with at Least One Visit for Core Dental Procedures for Members with a Chronic Condition

Definition: Percentage of members with a chronic condition diagnosis (see Appendix B for definition) who had a visit for any of the following common dental procedures - "D0120" Periodic oral exam, "D0150" Comprehensive oral exam, "D0210" Complete X-rays, "D0272" Bitewing X-rays, "D0330" Panoramic X-rays, "D1120" Child prophylaxis, "D1203" Application of topical fluoride, "D2331" Anterior tooth resin, "D2150" Permanent tooth amalgam, "D2751" Porcelain crown, "D2930" Prefabricated steel crown, D3220" Therapeutic pulpotomy, "D3310" Root canal, "D7110" Extraction

Source: Medicaid Claims

Steward: CHSE

H2.4: Integration of oral health services with physical health services will be associated with reduced growth of spending on oral health services in high-cost settings (e.g., ED) and sustained or increased spending on preventive oral health services

Spending on ED Visits for Dental Conditions PMPM

Formal Name: Spending on ED Visits for Dental Conditions Per Member, Per Month

Definition: Sum of spending, divided by months of enrollment, for ED visits for either traumatic or non-traumatic dental conditions identified using codes drawn from the Association of State & Territorial Dental Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

Spending on Dental Services Excluding ED Visits for Dental Conditions PMPM

Formal Name: Spending on Dental Services Excluding ED Visits for Dental Conditions Per Member, Per Month

Definition: Sum of spending, divided by months of enrollment, for dental services in a calendar year (identified using procedure codes from D0100 to D0999) excluding ED visits for traumatic or non-traumatic dental conditions identified using codes drawn from the Association of State & Territorial Dental Directors Recommended Guidelines for Surveillance of Non-Traumatic Dental Care in Emergency Departments

Source: Medicaid Claims

Steward: CHSE

Health-Related Services

H3.2 Enrollees receiving HRS will report satisfaction with those services and better patient experience overall

Members with Any Primary Care

Description: Percentage of members who received any primary care during the measurement year. CPT codes are used to identify primary care provider visits, based on an algorithm from Chang et al (see <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3108147/>).

Source: Medicaid Claims

Steward: CHSE

Note: Results for this measure are not directly comparable to data presented in OHA's Primary Care in Oregon report, due to different definitions and methodologies used.

Getting Care Quickly

Description: Average of two percentages: Percentage of members who said they usually or always got care for illness or injury as soon as needed; and percentage of members who said they usually or always got non-urgent/routine care appointments as soon as needed within the last six months

Source: CHSE used a summarized CAHPS Survey data extract from OHA to calculate this measure

Steward: CAHPS Health Plan

Getting Needed Care

Description: Average of two percentages: Percentage of members who said it was usually or always easy to get needed care, tests, or treatments; and percentage of members who said it was usually or always easy to get appointments with specialists as soon as needed within the last six months

Source: CHSE used a summarized CAHPS Survey data extract from OHA to calculate this measure

Steward: CAHPS Health Plan

Rating of All Health Care

Description: Percentage of members who rated all their health care in the last six months an 8, 9, or 10 on a scale of 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible

Source: CHSE used a summarized CAHPS Survey data extract from OHA to calculate this measure

Steward: CAHPS Health Plan

H3.3 Use of HRS will be associated with reduced utilization of more intensive or higher-cost care

ED Utilization per 1,000 MM

Formal Name: Ambulatory Care: ED Utilization per 1,000 MM

Description: Number of emergency department visits by members, reported per 1,000 member months

Source: Medicaid Claims

Steward: NCQA (HEDIS 2016)

H3.4 Use of HRS will help address social determinants of health to improve individual and population health outcomes

Member Rating of Health Status

Description: Percentage of members who rated their overall health as good, very good, or excellent

Source: CHSE used a summarized CAHPS Survey data extract from OHA to calculate this measure

Steward: CAHPS Health Plan

H3.5 Use of HRS will be associated with reduced growth of total spending and spending in high cost settings (e.g., ED and inpatient) and with sustained or increased spending on primary or preventive care

Total Spending PMPM

Formal Name: Total Spending Per Member, Per Month

Definition: Total spending on emergency department, primary care, prescription drug, inpatient, behavioral health, and other outpatient spending, divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

ED Spending PMPM

Formal Name: ED Spending Per Member, Per Month

Description: Total spending on emergency department services (excluding behavioral health services), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Inpatient Spending PMPM

Formal Name: Inpatient Spending Per Member, Per Month

Description: Total inpatient spending (facility and professional, excluding behavioral health services), divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Primary Care Spending PMPM

Formal Name: Primary Care Spending Per Member, Per Month

Description: Total spending on primary care services (excluding behavioral health services) for members, divided by months of enrollment

Source: Medicaid Claims

Steward: CHSE

Note: Results for this measure may not match the values in OHA's Primary Care Spending in Oregon report, due to differences in definitions and methodologies used.

Dual-Eligible Members

H4.1: The proportion of dual-eligible members enrolled in a CCO will increase compared with past demonstration levels without loss of member satisfaction

Percentage of Oregon Dual-Eligible Members Enrolled in CCOs

Description: Percentage of members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition) who were enrolled in a CCO at any time during the measurement year

Source: APAC and Medicaid Claims

Steward: CHSE

Note: These numbers are not directly comparable to OHA's reporting of CCO enrollment rates for dual-eligible members, because our data did not allow us to exclude non-FBDE members (who are not eligible for CCO enrollment).

H4.2: CCO enrollment will encourage appropriate use of clinical resources and ancillary care for dual-eligible members

Members with Any Primary Care (Dual-Eligible Population)

Description: Percentage of members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), who received any primary care during the measurement year

Source: APAC and Medicaid Claims

Steward: CHSE

Adults' Access to Preventive-Ambulatory Services (Dual-Eligible Population)

Description: Percentage of adults who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), who had an outpatient or preventive care visit in the measurement year

Source: APAC and Medicaid Claims

Steward: NCQA (HEDIS 2016)

Outpatient Visits for Behavioral Health Care per 1,000 MM (Dual-Eligible Population)

Description: Number of outpatient visits for behavioral health care by members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), reported per 1,000 member months

Source: APAC and Medicaid Claims

Steward: CHSE

Outpatient Visits for Non-Behavioral Health Care per 1,000 MM (Dual-Eligible Population)

Description: Number of outpatient visits for non-behavioral health care by members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), reported per 1,000 member months

Source: Medicaid Claims

Source: APAC and Medicaid Claims

Steward: CHSE

ED Utilization per 1,000 MM

Formal Name: Ambulatory Care: ED Utilization per 1,000 MM (Dual-Eligible Population)

Description: Number of emergency department visits by members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), reported per 1,000 member months

Source: APAC and Medicaid Claims

Steward: NCQA (HEDIS 2016)

Potentially Avoidable ED Visits (Dual-Eligible Population)

Description: Number of emergency department visits with a diagnosis indicating they were preventable or treatable with appropriate primary care, for members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), reported per 1,000 member months

Source: APAC and Medicaid Claims

Steward: Medi-Cal

30-day Plan All-Cause Readmissions (Dual-Eligible Population)

Description: Number of acute inpatient stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days for members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition)

Source: APAC and Medicaid Claims

Steward: NCQA (HEDIS 2016)

Total Spending PMPM

Formal Name: Total Spending Per Member, Per Month (Dual-Eligible Population)

Description: Total spending for members for members who were dually eligible for Medicare and Medicaid services (see Appendix B for definition), divided by months of enrollment

Source: APAC and Medicaid Claims

Steward: CHSE

Quantitative Methods

Overview

This appendix provides details on quantitative methods used throughout this report. The first section describes methods used to analyze claims- and survey-based outcome measures, including data sources, definition of study populations, specification of statistical models, and calculation of spending measures. The second section provides additional information on the analysis of HRS spending data presented in Chapter 6.

Analysis of Outcome Measures

Data

We relied on the following data sources to calculate outcome measures for the evaluation:

- Medicaid claims/encounters and enrollment records from OHA's HSD.
- Medicare claims/encounters and enrollment records from OHA's APAC database.
- CAHPS survey responses from the Medicaid CAHPS survey administered by OHA.
- Specialized data extracts from OHA.

We used data spanning the years 2011-2019 for most claims-based measures. In addition to Medicaid data, we used Medicare claims and enrollment records from the APAC database to calculate measures for dual-eligible members. We obtained APAC data for the years 2011 through 2018. However, data validation suggested that Medicare Advantage enrollment records prior to 2013 were incomplete, and we therefore did not include 2011-2012 in our analyses. Two evaluation measures (Screening, Brief Intervention, and Referral to Treatment and Assessments within 60 Days for Children in ODHS Custody) required data not available in Oregon's Medicaid Management Information System (MMIS). We therefore obtained separate data extracts from OHA to calculate these measures. For CAHPS-based measures and Assessments within 60 days for Children in ODHS Custody, we used data spanning the years 2014-2019 due to lack of data for prior years. Screening, Brief Intervention, and Referral to Treatment was only analyzed for 2019, because this was the first year of EHR-based (as opposed to claims-based) data collection. As such, prior years were not directly comparable.

Study Populations

We used the following definitions to identify CCO-enrolled non-dual-eligible members and dual-eligible members, respectively, for inclusion in the analyses:

CCO-enrolled non dual-eligible members. Analyses of measures for evaluation questions 1 (behavioral health integration), 2 (oral health integration), and 3 (health-related services) included all members enrolled in a CCO at least three months in the year who were not dual-eligible members. (See below for the definition of dual-eligible members.) For 2011, we included members enrolled in an MCO. For analysis of measures based on CAHPS survey responses, we attempted to exclude data for dual-eligible members by excluding all responses from members age 65 and older. (CAHPS responses did not include information needed to directly identify dual-

eligible members.) Additionally, we excluded CAHPS responses for which the CCO name was “Fee-for-Service.”

Dual-eligible members. Analyses of measures for evaluation question 4 included all dual-eligible members enrolled in OHP (including FFS enrollees) and in Medicare FFS or Medicare Advantage for at least three months in the year.

Measure-specific subpopulations

For behavioral health integration measures, we defined a subpopulation of the non-dual-eligible, CCO-enrolled population as members with SPMI or SUD. We refer to this subpopulation as “members with behavioral health conditions.”

Members were identified as having SPMI if they met one of the following criteria in a calendar year:

1. Any health care claim during the year for inpatient hospitalization, partial hospitalization in a psychiatric facility, or psychiatric residential care with a diagnosis listed in Exhibit B.1.
2. Two or more health care claims, on separate dates within the year, with a diagnosis listed in Exhibit B.1.

Exhibit B.1: Diagnosis Codes Used to Identify People with SPMI

| Diagnosis | ICD-9 Codes | ICD-10 Codes |
|--|-----------------------------|---------------------------------------|
| Schizophrenia and other psychotic disorders | 295.XX, 297.3, 298.8, 298.9 | F20, F23, F24, F25, F28, F29 |
| Major depression and bipolar disorders | 296.XX | F30, F31, F32, F33, F34.8, F34.9, F39 |
| Schizotypal and borderline personality disorders | 301.22, 301.83 | F21, F60.3 |
| Post-traumatic stress disorder | 309.81 | F43.10, F43.11, F43.12 |
| Obsessive compulsive disorder | 300.3 | F42 |

This definition of SPMI was developed internally at CHSE in collaboration with a physician researcher at OHSU. Codes were selected for clinical relevance using definitions from the Washington State Medicaid Transformation Project and the Kansas Department of Aging and Disability.

Members were identified as having SUD if they had two or more claims in the preceding two years with a SUD diagnosis (see Exhibit B.2). Diagnosis codes for identifying alcohol/opioid/other drug use disorders were taken from the Healthcare Effectiveness Data and Information Set (HEDIS) AOD Dependence Value Set. This definition includes alcohol, opioid, cannabis, sedative, hypnotic, anxiolytic, cocaine, stimulant, hallucinogen, inhalant, and psychoactive substance abuse and dependence.

Exhibit B.2: Diagnosis Codes Used to Identify People with SUD

| Diagnosis | ICD-9 Codes | ICD-10 Codes |
|---|--|--------------|
| Alcohol Abuse and Dependence | 291, 291.1, 291.2, 291.3, 291.4, 291.5, 291.8, 291.81, 291.82, 291.89, 291.9, 303.00–303.03, 303.90–303.93, 305.00–305.03, 535.30, 535.31, 571.1 | F10 |
| Opioid Abuse and Dependence | 304.00–304.03, 304.70–304.73, 305.50–305.53 | F11 |
| Cannabis Abuse and Dependence | 304.30–304.33, 305.20–305.23 | F12 |
| Sedative, Hypnotic, or Anxiolytic Abuse or Dependence | 304.10–304.13, 305.40–305.43 | F13 |
| Cocaine Abuse and Dependence | 304.20–304.23, 305.60–305.63 | F14 |
| Other Stimulant Abuse and Dependence | 304.40–304.43, 305.70–305.73 | F15 |
| Hallucinogen Abuse and Dependence | 304.50–304.53, 305.30–305.33 | F16 |
| Other Drug Abuse and Dependence | 304.60–304.63, 304.80–304.83, 304.90–304.93, 305.80–305.83, 305.90–305.92 | F18, F19 |

For evaluation question 2 (oral health integration), we also defined persons with a chronic physical health condition. We defined chronic physical health conditions broadly, using Chronic Illness and Disability Payment System (CDPS) risk adjusters as well as markers from the CMS Chronic Conditions Data Warehouse.⁴⁰ Chronic conditions included acquired hypothyroidism; acute myocardial infarction; Alzheimer’s disease; anemia; asthma; atrial fibrillation; benign prostatic hyperplasia; cataracts; chronic kidney disease; chronic obstructive pulmonary disease; cystic fibrosis; diabetes; epilepsy; glaucoma; heart failure; HIV/AIDS; hip or pelvic fracture; hyperlipidemia; hypertension; hypothyroidism; ischemic heart disease; kidney disease; liver disease; multiple sclerosis; muscular dystrophy; osteoporosis; rheumatoid arthritis; stroke; and a variety of cancers (breast, colorectal, lung, prostate, leukemia, and endometrial). Behavioral health conditions including psychiatric and substance use indicators were excluded from our definition of chronic physical health conditions.

Subgroups

We further stratified analyses for subgroups based on age group, gender (using the binary classification available in Medicaid enrollment data), geography of residence (urban, rural, isolated), disability (disabled, not disabled), and the presence of chronic health conditions. Exhibit B.3 provides definitions for each subgroup. For measures associated with evaluation question 4 (dual-eligible members), we stratified by geography of residence only. Due to limited demographic information in the CAHPS data, we did not report subgroup results by geography of residence, disability status, or chronic condition status for CAHPS-based outcomes.

Exhibit B.3: Subgroup Definitions

| Criteria | Subgroups | Definition |
|------------------------|-------------------|---|
| Age group | <18 | Age as indicated in Medicaid enrollment records (for claims-based measures) or self-reported age (for CAHPS-based measures) |
| | 18-34 | |
| | 35-64 | |
| Gender | Female | Gender (binary classification) as indicated in Medicaid enrollment records |
| | Male | |
| Geography of residence | Isolated | Resided in an area without a population center of 2,500 or more, with no commuting flows to an urban area |
| | Rural | Resided in an area with a population center of 2,500 to 49,000, or connected to such an area through commuting patterns |
| | Urban | Resided in an area with a population center of 50,000 or more, or connected to such an area through commuting patterns |
| Other characteristics | Disabled | Eligible for Medicaid based on blindness or another disability |
| | Chronic condition | Presence of chronic physical health condition based on markers from CDPS and the Chronic Conditions Data Warehouse. |

Focus populations

Additionally, for measures assessing behavioral and oral health integration, we examined outcomes for populations of focus, defined in the evaluation design as “groups that have historically experienced disproportionately poor health outcomes, or that have been identified by Oregon’s leadership as appropriate populations on which to focus the state’s health improvement efforts.”⁴¹ In consultation with OHA (and considering the lack of data on race and ethnicity), we selected two focus populations:

- Children, defined as individuals under the age of 18.
- Individuals with limited English language proficiency, defined as persons from a household where the main language spoken is not English, based on HSD enrollment data.

We compared outcomes for each focus population to a “reference” population, representing a “group that has historically experienced favorable health outcomes relative to other groups with respect to the particular outcome or issue under examination.”⁴² We used adults and members of English-speaking households, respectively, as reference groups for the selected focus populations. For behavioral health measures, we did not analyze outcomes for children versus adults, as many of these measures apply mostly, or entirely, to the adult population.

Statistical Models

We used two analytic approaches to reflect different aspects of progress.

Pre-post

Our main analysis assessed changes from two baseline points, 2011 (prior to the CCO transition) and 2016 (prior to the waiver renewal), comparing changes from those years to 2019. In these analyses, we estimated the following equation:

$$Y_{it} = m(b_0 + b_1 * \text{Year2019}_t + a * X_{it} + e_{it}) \quad (1)$$

where Y_{it} is the outcome of interest for individual i in year t , $\text{Year2019} = 1$ if the observation occurred in the Year 2019 and 0 otherwise, X_{it} is a vector of demographic covariates and risk adjusters, and e_{it} is a random error term associated with the unmeasured variation in the outcome of interest. We ran this regression twice: once using data from 2011 and 2019, and once using data from 2016 and 2019.

We use the following individual level covariates: age-range (<18, 18-34, 35-64, and 65+); gender (female, male); urban residence based on zip code; CDPS risk indicators; and an indicator for individuals newly enrolled as part of the 2014 Medicaid expansion. We clustered standard errors at the level of the Primary Care Service Area.⁴³

To obtain results for subgroups, we estimated model (1) separately for each subgroup.

Difference-in-differences

For selected populations, we compared changes in a focus population to a reference population, as defined above. These analyses were intended to provide insights as to whether focus population outcomes improved more or less relative to the reference population. We estimated the following equation:

$$Y_{it} = m(b_0 + b_1 * \text{Year2019}_t + b_2 * \text{Focus}_i + b_3 * \text{Year2019}_t * \text{Focus}_i + a * X_{it} + e_{it}) \quad (2)$$

where Focus_i takes a value of 1 if the individual is part of the relevant focus population. The coefficient b_3 measures the “difference-in-differences,” or the difference between the 2016-2019 change in the focus population and the 2016-2019 change in the reference population. For measures where higher values represent an improvement, a positive, statistically significant value for this coefficient indicates that improvement from 2016 to 2019 was greater in the focus population compared to the reference population. (For measures where lower values represent an improvement, a negative, statistically significant value indicates an improvement over time for the focus population relative to the reference population.)

Spending Measures

Our spending measures used imputed prices for claims where the “amount allowed” was zero due to capitation or other payment arrangements. For these claims, we did not have detailed information on actual amounts paid to providers. Through imputation, we attached the same “price” to similar services, disregarding any differences in actual amounts paid across CCOs. The spending measures, which sum across these repriced claims, can thus be considered “price-weighted volume-of-care” measures. Expenditures are higher with greater utilization of services, or with services that, on average, cost more. However, these measures do not capture differences in reimbursement rates that may exist among CCOs.

To address medical encounter claims where the “amount allowed” was listed as zero, we imputed spending by taking the annual mean value for non-zero payments across six categories of spending: inpatient, emergency department, outpatient, professional, pharmacy, and other. We further calculated mean values separately for each Current Procedural Terminology (CPT) code or Diagnosis Related Group (DRG). Dental encounter claim spending where the “amount allowed” was entered as zero was imputed using the annual mean value by CPT. Pharmacy claim spending was imputed using the annual mean value by National Drug Code (NDC). We used the same methodology to impute Medicare Advantage claims to calculate spending for dual-eligible members. Following imputation, we checked for duplication between Medicare and Medicaid medical claims based on Member ID, visit dates, diagnosis codes, and DRG/CPT codes. Where duplicates were identified, the Medicaid claim was dropped.

Spending data were further adjusted for inflation using the Consumer Price Index (CPI) to represent 2019 dollars.⁴⁴ To reduce the sensitivity of health expenditure data to rare conditions, we limited the covariates in these analyses to age, gender, urban versus rural residence, language, and presence of any chronic condition. We also top-coded outlier individuals at the 99th percentile (e.g., spending for individuals above the 99th percentile for a given measure and year was censored at the 99th percentile).

Analysis of HRS Spending from Exhibit L

We collected HRS spending data from CCOs’ Exhibit L financial reports for the years 2014 through 2019. These reports, submitted to OHA annually, contain member services expenses broken out by type—including HRS—as well as member months (except for 2014 and 2015, for which member months were gathered from OHA enrollment reports).⁴⁵ Exhibit L data may not provide a complete picture of a CCO’s spending on HRS in a given year and may not be directly comparable across years. We describe these limitations below and outline the adjustments we made to account for missing and inconsistent entries.

Limitations of the HRS Data

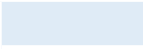


Not all CCOs reported HRS spending prior to 2019. CCO stakeholders confirmed that there were years where they did make HRS expenditures but did not report them to the state. Exhibit B.4 summarizes the years of HRS data available in Exhibit L for each CCO. PacificSource Central Oregon, PacificSource Columbia Gorge, Cascade Health Alliance, Eastern Oregon CCO, and Yamhill CCO reported no HRS in 2014. Eastern Oregon CCO, PacificSource Central Oregon, and PacificSource Columbia Gorge also did not report any HRS in 2015. Trillium Community Health Plan was not required to submit an Exhibit L in 2014 or 2015. The absence of data for 2014 and 2015 may cause us to underestimate HRS spending in these years.

For 2018 and 2019, we limited our data to expenditures approved by OHA as meeting the requirements for HRS. In 2019, 61.6% of HRS spending was approved, with approval highest for flexible services and HIT spending. Three CCOs (InterCommunity Health Network, PacificSource Central Oregon, and PacificSource Columbia Gorge) had no approved HRS spending in 2018, because they did not provide sufficient detail on the spending for OHA to qualify it as HRS. Prior to 2018, reporting of HRS spending on Exhibit L was not subject to OHA review and approval. For the years 2014-17, we therefore report on all HRS spending submitted by CCOs (including expenditures that may not have satisfied OHA’s requirements). By including expenses that were not reviewed and approved by OHA, we may overestimate spending in 2014-2017.

In addition to under- and over-reporting concerns, HRS data from Exhibit L are not directly comparable across years. Beginning in 2018, CCOs were required to report HRS spending line items separately (rather than simply reporting total HRS spending). Exhibit B.5 presents HRS reporting requirements and the years they were implemented. Some of these requirements were “soft” requirements prior to 2019. For instance, OHA HRS guidelines issued in 2019 noted that “many CCOs’ 2018 annual Exhibit L templates did not include rationales for their HRS expenditures, but were accepted as HRS based on the details in the HRS investment name.” Going forward, the state indicated that only HRS expenditures “with a clear rationale would be considered for qualification as HRS.”⁴⁶

Exhibit B.4: CCOs’ Reporting of HRS Expenditures in Exhibit L, by Year

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|------------------------------------|------|------|------|------|------|------|
| Advanced Health | | | | | | |
| AllCare CCO | | | | | | |
| Cascade Health Alliance | | | | | | |
| Columbia Pacific | | | | | | |
| Eastern Oregon CCO | | | | | | |
| FamilyCare | | | | | N/A | N/A |
| Health Share of Oregon | | | | | | |
| InterCommunity Health Network | | | | | | |
| Jackson Care Connect | | | | | | |
| PacificSource Central | | | | | | |
| PacificSource Gorge | | | | | | |
| Primary Health of Josephine County | | | | | | |
| Trillium Community Health Plan | N/A | N/A | | | | |
| Umpqua Health Alliance | | | | | | |
| Willamette Valley Community Health | | | | | | |
| Yamhill Community Care | | | | | | |

 Non-zero *reported* spending in Exhibit L.
 Non-zero *approved* spending.
 Zero reported/approved spending.

FamilyCare ceased operations in January 2018. Trillium was not required to submit an Exhibit L in 2014 or 2015.

Exhibit B.5: Exhibit L HRS Reporting Requirements, by Year

| Year | New Exhibit L Reporting Requirements | New Optional Items |
|------|--|---|
| 2014 | Include HRS as a medical spending line item in Exhibit L | |
| 2018 | Report each HRS line item. For each item, provide: <ul style="list-style-type: none"> • Service name • Category • Amount (\$) flexible services • Amount (\$) community benefit initiatives • Rationale • Length of investment • Number of members served for flexible services line items | <ul style="list-style-type: none"> • Intended outcomes, projected ROI • Number of members served for community benefit initiatives and HIT |
| 2019 | <ul style="list-style-type: none"> • Amount (\$) for HIT (separately from community benefit initiative amount) • Description of services • Type of organization receiving funds • Investment goal • Medicaid member IDs of those receiving flexible services unless the item “is relatively inexpensive and the vast majority of members routinely receive the item.” | <ul style="list-style-type: none"> • Start and end date of investment • Time period in which outcomes will be achieved • Medicaid member IDs for community benefit initiatives and HIT |
| 2020 | <ul style="list-style-type: none"> • Medicaid member IDs for persons receiving at least \$200 in HRS • HRS category and \$ amount (by member ID) for persons receiving at least \$200 in HRS | |

Sources:

Oregon Health Authority. (2018 and 2019). *Exhibit L financial reporting templates*.

Oregon Health Authority. (2019). *CCO Guidance for Exhibit L Financial Reporting Template: Health-Related Services Expenditures*. <https://www.oregon.gov/oha/HSD/OHP/CCO/Exhibit%20L%20-%20General%20Guidelines%20for%20CCO%20HRS%20Spending.pdf>

Oregon Health Authority. (2020). *CCO Guidance for Exhibit L Financial Reporting Template: Health-Related Services Expenditures*. <https://www.oregon.gov/oha/HPA/dsi-tc/Documents/Health-Related-Services-Exhibit-L-Reporting-Guide.pdf>

Oregon Health Authority. (2020). *HRS Frequently Asked Questions*.

Adjustments

We made the following adjustments to the HRS spending data from Exhibit L reports:

Imputation of missing data on members served: When data on “members served” were missing, but the name, description, and/or rationale fields indicated that one member was served, we replaced the missing value with a value of one. When “members served” was entered as one, but these fields indicated more members were served, we changed the value to missing.

Imputation of HRS categories: When the category was missing, we imputed it where possible using the name and description or rationale fields. In some cases, the name, description, rationale, and spending type (flexible services/community benefit initiative/HIT) variables conflicted with the category. We retained the category except in these situations:

- If the spending type was reported as HIT or if the name or description indicated spending was for HIT, but the category was not HIT, we categorized these services as HIT.
- If the spending type was reported as flexible services, but the category was “Programs to improve community or public health,” we categorized these services as Other.

Imputation of spending type: In some cases, the name or description conflicted with the spending type. We imputed spending type to HIT when the name or description indicated HIT, as HIT investments were most easily identifiable.

Inflation adjustment: We converted spending amounts for 2014-2018 to 2019 dollars using CPI data from the Bureau of Labor Statistics.⁴⁷

CCO Interview Guide

The questions below are the general topic areas we will explore with interview participants. The questions will be modified in light of what we learn during the study, to fit the timing of the interview, and to fit the expertise of the interviewee.

Introduction to the Study

Hello and thank you for participating in today's interview. We are speaking with you because we value your perspective, and we would like to hear about efforts by your CCO to address health-related social and economic needs in the community. We're especially interested in learning how new CCO contracts with the Oregon Health Authority, sometimes called "CCO 2.0," have affected these efforts. This study will help policymakers and other stakeholders understand how health care organizations can address health-related social and economic needs.

Introduction to the Interviewee

I'd like to start by telling you a little bit about myself. I am [name]. I work at [name] as a [role].

[Invite the respondent to introduce themselves.]

1. Please tell me about yourself.

- What is your role at [CCO name]?
- How long have you worked for [CCO name]?

2. Please tell me about your role as it relates to addressing health-related social and economic needs in the community.

- What are your specific responsibilities in this area?
- How long have you been involved in this work?

Thank you for the introduction! Now that I have a better understanding of your role, I'd like to talk about your CCO's approach to addressing health-related social and economic needs.

Approach to Social Determinants of Health

We understand that CCOs' new contracts with the Oregon Health Authority require CCOs to spend a portion of their net income or reserves on services to address "social determinants of health" and "health equity." We also understand that different CCOs may be thinking about these terms in different ways.

3. How does your CCO define "social determinants of health" and "health equity"?

- To what extent do you see a connection between social determinants of health and health equity?
- To what extent is your CCO addressing social determinants of health together or separately?

[If the respondent needs more information to help answer the question, read the following definition and ask Question 3 again. Otherwise, proceed to Question 4.]

The Oregon Health Authority uses the following definitions of “social determinants of health” and “health equity”:

- *“Social determinants of health” means the social, economic, and environmental conditions in which people are born, grow, work, live, and age.*
- *“Health equity” means that all people can reach their full potential and well-being, and are not disadvantaged by their race, ethnicity, language, disability, gender, gender identity, sexual orientation, social class, intersections among these communities or identities, or other socially determined circumstances. Achieving health equity requires the ongoing collaboration of all regions and sectors of the state, including tribal governments to address the equitable distribution or redistributing of resources and power; and recognizing, reconciling and rectifying historical and contemporary injustices.*

[If the respondent says the CCO is addressing these concepts together, say:] *Next, I’m going to ask you questions about social determinants of health, but for your CCO we would take that to include health equity, since you’re addressing social determinants of health and equity together.*

[If the respondent says the CCO is addressing these concepts separately, say:] *For the rest of this interview, I’m going to focus on social determinants of health, but I’ll ask you later in the interview about health equity.*

- 4. Please tell me about your CCO’s approach to addressing social determinants of health.** [If the respondent said the CCO is addressing these concepts together, add:] **We understand this includes health equity for your CCO.**
 - What are the most important goals of this approach?
 - Which populations does your CCO serve with this approach?
 - What are your CCO’s highest-priority projects in this area?
 - Which projects address health disparities?
- 5. Please tell me about the partner organizations your CCO is working with to address social determinants.** [If the respondent said the CCO is addressing these concepts together, add:] **We understand this includes health equity for your CCO.**
 - Which partner organizations is your CCO working with most closely?
 - How did your CCO choose to work with them?
 - How long has your CCO been working with them?
- 6. To what extent do community-based organizations, such as social service providers, work with health care providers in your CCO’s network on project to address social determinants of health?** [If the respondent said the CCO is addressing these concepts together, add:] **We understand this includes health equity for your CCO.**
 - What mechanisms are in place to sustain these efforts?
 - How does your CCO’s approach to addressing social determinants of health help your CCO achieve its goals as a health care organization?

7. How is this approach different from what your CCO was doing before the new contracts with Oregon Health Authority, sometimes called “CCO 2.0”? [If needed, remind the respondent that the contracts extend from 2020 through 2024.]
8. What kinds of challenges does your CCO face with addressing social determinants of health? [If the respondent said the CCO is addressing these concepts together, add:] We understand this includes health equity for your CCO.

Resources Allocated to Social Determinants of Health

Next, we'd like to ask about the resources allocated by your CCO to addressing social determinants of health.

9. Please tell me about the resources allocated by your CCO to addressing social determinants of health right now. [If the respondent said the CCO is addressing these concepts together, add:] We understand this includes health equity for your CCO.
 - Has your CCO targeted a specific dollar amount or percentage of total spending for social determinants of health?
 - What proportion of your CCO's overall spending does spending on social determinants of health represent?
 - How does your CCO track spending on social determinants of health?
 - Has your CCO allocated specific staff to work on social determinants of health?
 - How adequate are these resources for meeting your CCO's goals?
10. Please tell me about the resources allocated by your CCO to addressing social determinants of health before CCO 2.0. [If the respondent said the CCO is addressing these concepts together, add:] We understand this includes health equity for your CCO.
 - Did your CCO target a specific dollar amount or percentage of total spending for social determinants of health?
 - What proportion of your CCO's overall spending did spending on social determinants of health represent?
 - How did your CCO track spending on social determinants of health?
 - Did your CCO allocate specific staff to work on social determinants of health?
 - How adequate were these resources for meeting your CCO's goals?

Health-Related Services

Next, we'd like to ask about your CCO's use of “health related services.” The Oregon Health Authority defines health-related services as services not covered by Medicaid that are intended to improve care delivery and overall member and community well-being. They include services delivered to individuals to supplement covered benefits and improve well-being, sometimes called “flexible services,” and community-level interventions focused on improving population health and health care quality, sometimes called “community benefit initiatives.”

The Oregon Health Authority has said that CCOs can use health-related services to address social determinants of health.

11. Please tell me about your CCO's approach to providing health-related services.

- What are your CCO's most important goals for health-related services?
- Which populations does your CCO target with health-related services?
- What kinds of health-related services does your CCO provide to individuals?
- What kinds of health-related services does your CCO provide to communities?
- What kinds of health-related services does your CCO provide that are related to health information technology?
- How do health-related services your CCO provides address health disparities?

12. To what extent are your CCO's health-related services related to your other work to address social determinants of health?

- What kinds of health-related services provided by your CCO address social determinants of health?
- What kinds of health-related services provided by your CCO do not address social determinants of health, but serve other goals?
- How much overlap exists between staff who work on health-related services and staff who work on social determinants of health at your CCO?

13. What kinds of challenges does your CCO face with providing health-related services?

Health Equity

[If the respondent said the CCO is addressing social determinants of health and health equity together in response to Question 3, proceed to Question 13; if the respondent said the CCO is addressing social determinants of health and health equity separately in response to Question 3, skip to Question 14.]

Earlier in this interview, you mentioned that your CCO is addressing social determinants of health and health equity together. We want to make sure we have a complete picture of your CCO's efforts to promote health equity.

14. Please tell me about any efforts by your CCO to promote health equity that we haven't already discussed.

- What kinds of health disparities exist in your community?
- What kinds of health disparities is your CCO working to reduce?
- What kinds of training is your CCO using to promote health equity?
- Please tell us about your CCO's health equity plan.
- How is your CCO's approach to health equity different from what your CCO was doing before the new contracts with Oregon Health Authority?

[Skip to Question 15.]

Earlier in this interview, you mentioned that your CCO is addressing social determinants of health and health equity separately.

15. Please tell me about your CCO's efforts to promote health equity.

- What kinds of health disparities exist in your community?
- What kinds of health disparities is your CCO working to reduce?
- What kinds of training is your CCO using to promote health equity?
- Please tell us about your CCO's health equity plan.
- How is your CCO's approach to health equity different from what your CCO was doing before the new contracts with Oregon Health Authority?

Plans for the Future and Wrap-Up

Now, we'd like to transition back to asking about your CCO's overall efforts to address social determinants of health.

16. Please tell me about your CCO's plans to address social determinants of health in the future.

[If the respondent said the CCO is addressing these concepts together, add:] **We understand this includes health equity for your CCO.**

- What will your CCO be doing in this area a year from now?
- What will your CCO be doing in this area four years from now, when the new contracts with the Oregon Health Authority end?
- How will the resources allocated by your CCO to address social determinants of health change in the future?

17. Before we close, what else should we know about your CCO's efforts to address social determinants of health?

- What have we missed about your CCO's efforts in this interview?

Thank you very much for taking time to meet with us. We learned a great deal about your CCO's efforts to address health-related social and economic needs, and your insights were invaluable. We are conducting interviews with all CCOs to understand the "big picture" of their efforts in this area. We may follow up with your CCO to learn more about specific topics we discussed today.

[Turn off the recording device.]

Overview of CCO 2.0

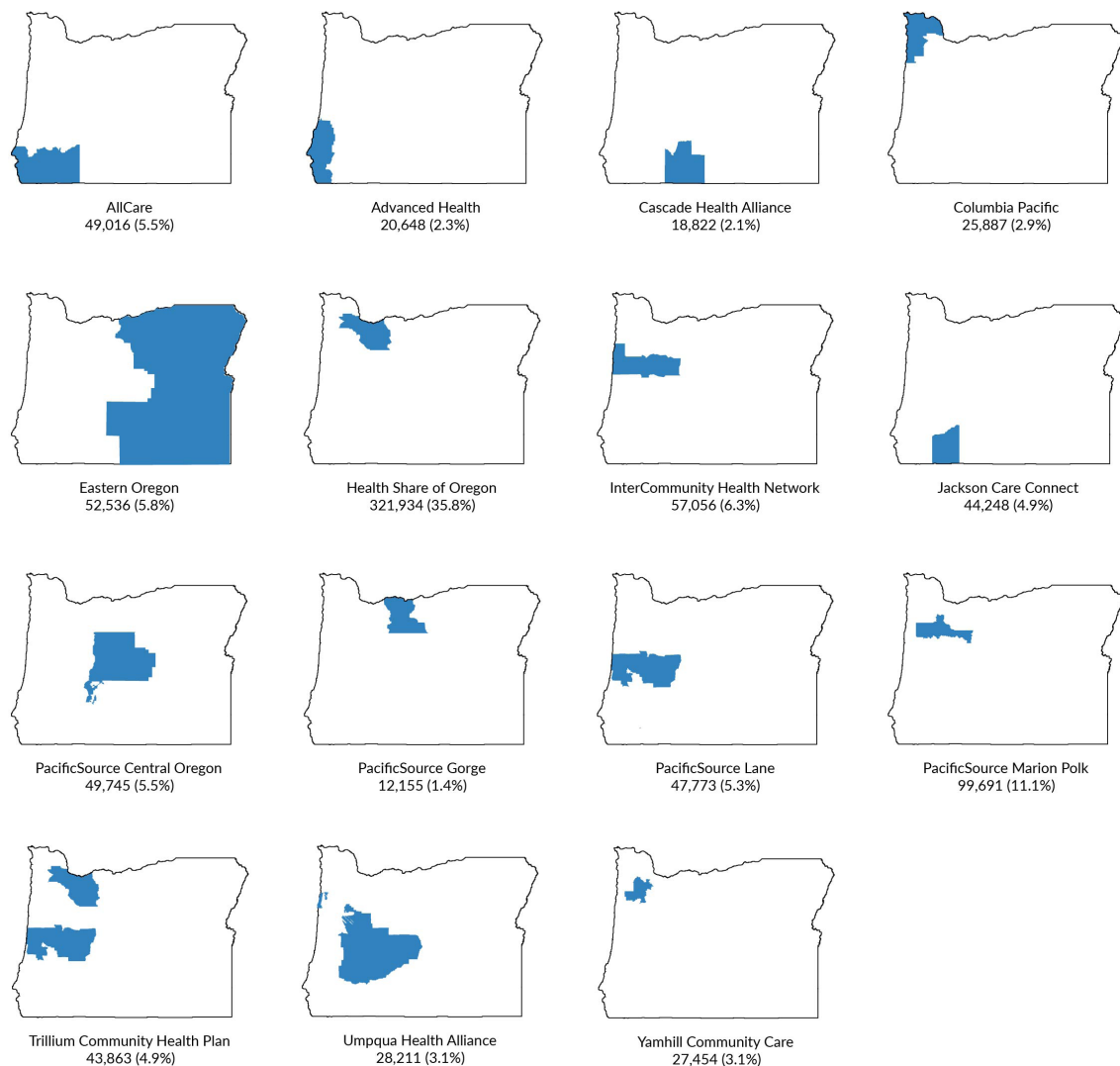
Overview

In 2019, OHA awarded new five-year contracts to 15 CCOs, which were required to implement CCO 2.0 models beginning January 1, 2020. This appendix summarizes the key features of the CCO 2.0 model relating to SDOH, health equity, VBP, and behavioral health. The summative evaluation (featuring data through 2021) will assess the ways in which CCO 2.0 implementation affected Oregon's progress and goals set out in the 2017-2022 waiver renewal.

Service Areas and Enrollment

Figure D.1 shows CCO 2.0 service areas, members enrolled with each CCO, and percentage of total CCO enrollment in January 2020.

Figure D.1: CCO 2.0 Service Areas



Figures represent number of members enrolled on January 15, 2020. Trillium Community Health Plan's tri-county service area did not go live until September 1, 2020. The number of members in the Trillium figure are all members enrolled in the Lane County service area.

Source: Oregon Health Authority, Office of Health Analytics. (2020). *Monthly Medicaid Population Report—CCO by Eligibility Group for Physical Plan Type* (January 2020).

Contractual Requirements to Address SDOH and Health Equity

The CCO 2.0 model included contractual requirements to address SDOH and health equity. (See Box D.1 for OHA's definition of health equity.) These requirements, detailed below, were designed to enhance spending on SDOH and health equity, ensure that the work addresses community and member priorities, and increase the effective use of traditional health workers (THWs), including community health workers. CCOs were required to give CACs a role in decisions on HRS community benefit spending and ensure that these projects aligned with priorities in their community health improvement plan. CCOs were also required to develop a Health Equity Plan, making equity an institutional foundation and creating more standardization of health equity infrastructure across communities. Additionally, CCOs had to hire a Health Equity Administrator and incorporate cultural responsiveness and implicit bias components in their training of staff.

Box D.1: OHA's Definition of Health Equity

In October 2019, OHA's Health Equity Committee finalized a new framework-oriented definition of health equity:

Oregon will have established a health system that creates health equity when all people can reach their full health potential and well-being and are not disadvantaged by their race, ethnicity, language, disability, gender, gender identity, sexual orientation, social class, intersections among these communities or identities, or other socially determined circumstances.

Achieving health equity requires ongoing collaboration of all regions and sectors of the state, including tribal governments to address:

- *The equitable distribution or redistribution of resources and power, and;*
- *Recognizing, reconciling and rectifying historical and contemporary injustices.*

The new framework drew attention to the inequitable distribution of power and resources as a root cause of health inequities and recognized the role of historical and current forms of discrimination and structural barriers facing racial and ethnic minority communities. OHA has adopted the goal of eliminating health inequities in Oregon by 2030.

Reference:

Oregon Health Authority. Health Equity Committee. <https://www.oregon.gov/oha/OEI/Pages/Health-Equity-Committee.aspx>

In 2021, CMS released State Health Official Letter 21-001 (Opportunities in Medicaid and CHIP to Address Social Determinants of Health), describing principles states should adhere to when offering services and supports to address SDOH within their Medicaid and CHIP programs, and outlining federal authorities states could use for this purpose. CMS identified a non-exclusive list of areas states could cover, including housing-related services and supports, non-medical transportation, home-delivered meals, educational services, employment, community integration and social supports, and case management. Oregon's wide-ranging SDOH efforts align with these directives.

The SHARE Initiative

The Supporting Health for All through Reinvestment (SHARE) Initiative emerged in response to a legislative requirement in Oregon's House Bill 4018 (2018), which aimed to address SDOH. The SHARE Initiative requires that a portion of CCOs' profits or net revenues are reinvested in their communities. These reinvestments must be directed to upstream factors that affect health.⁴⁸ The SHARE Initiative requirements include the following:

1. Spending must fall within SDOH domains (economic stability, neighborhood and built environment, education, and social and community health) and include spending toward a statewide housing priority.
2. Spending priorities must align with community priorities from CCOs' Community Health Improvement Plans (CHPs).
3. A portion of funds must go to SDOH Partners.
4. CCOs must designate a role for the CAC(s) related to its SHARE Initiative funds.

The SHARE Initiative began in 2020. In April 2021, CCOs reported 2020 SHARE designations (the portion of their net income to be contributed to the SHARE Initiative) based on 2020 financials. They will then submit spending plans for the 2020 designation in June 2021 and spend-down updates in April 2022. This cycle repeats annually. (For 2020 and 2021 expenditure years, CCOs have flexibility to decide how much of their profits they will contribute to the SHARE Initiative. OHA expects to set a formula to prescribe each CCO's annual SHARE Initiative requirement. This formula may be prescribed in CY 2022, although a firm date has not been established.)

Health Equity Plans

CCOs are required to develop and begin implementing a health equity plan. Initially scheduled for March 2020, the due date for these plans was postponed to December 2020.⁴⁹ CCOs are required to develop the plan with input from their CACs, other community members, and other stakeholders. CCOs are also required to submit annual progress assessments that describe efforts to increase capacity and leadership for health equity and cultural responsiveness, strategies to recruit, retain and promote a diverse workforce, how they have used REALD data, provision of linguistically appropriate services to members, and delivery of culturally and linguistically appropriate services in the organization and the provider network.⁵⁰

Traditional Health Workers (THWs)

As part of their 2020-2024 contracts, CCOs must implement the THW Integration and Utilization Plans developed as part of their applications. CCOs must inform members about the availability and benefits of THWs. CCOs must also increase their use of THWs and integrate them into the delivery of care, and are required to collect data on the use of, and payment for, THW services. Reporting on these efforts began in December 2020.⁵¹

Value-Based Payment

CCO 2.0 also expanded VBP requirements in accordance with Oregon's CCO VBP Roadmap (see Box D.2). Like many other states, Oregon adopted the Health Care Payment Learning and Action Network's (HCP-LAN) Alternative Payment Models Framework to categorize VBP arrangements and set specific targets. For example, the state will require at least 25% of CCOs' payments to include downside risk, categorized as HCP-LAN Category 3B, by 2024.

Box D.2: Oregon's CCO VBP Roadmap

OHA published its Value-Based Payment Roadmap for Coordinated Care Organizations ("the CCO VBP Roadmap") in September 2019. (OHA intentionally shifted from using the term "alternative payment model" (APM) to reflect the importance of linking payment with outcomes.) The CCO VBP Roadmap established a common definition of VBPs for Oregon's CCOs - "payments to a provider that explicitly reward the value that can be produced through the provision of health care services to CCO members" - and aligned Oregon's payment reform efforts with a national framework for categorizing VBPs, the HCP-LAN framework. This framework established four standardized payment categories, including:

1. Traditional FFS.
2. FFS with a quality component.
 - A. Foundational payments for infrastructure & operations.
 - B. Pay-for-reporting.
 - C. Pay-for-performance.
3. FFS with shared financial risk.
 - D. Alternative payment models (APMs) with shared savings.
 - E. APMs with shared savings and downside risk.
4. Population-based payments with a quality component.
 - E. Condition-specific population-based payment.
 - F. Comprehensive population-based payment.
 - G. Integrated finance and delivery system.

Oregon's CCO VBP Roadmap outlined specific requirements for CCOs during the CCO 2.0 contract cycle (2020-2024), including:

- Meeting increasing annual targets for the overall percentage of a CCO's payments that qualify as pay-for-performance (i.e., Category 2C in the LAN framework). By 2024, all CCOs are required to make at least 70% of payments as Category 2C payments.
- Beginning in 2023, meeting annual targets for the overall percentage of a CCO's payments that qualify as shared savings with downside risk (i.e., Category 3B in the LAN framework). By 2024, all CCOs are required to make at least 25% of payments as Category 3B payments.
- Establishing a new per-member per-month "Foundational Payment for Infrastructure and Operations" for PCPCHs. This payment model is required to include tiers that reward organizations for achieving higher levels of PCPCH recognition, with payment amounts increasing during each year of the CCO 2.0 contract.
- Developing targeted 2C or higher payment models in five care delivery areas: hospital care, maternity care, behavioral health care, children's health care and oral health care.

To evaluate progress toward these goals, OHA is monitoring CCOs' efforts to design, implement and expand VBP models. In 2020, these efforts were affected by the COVID-19 pandemic and the resulting temporary changes to the CCO incentive program (some of which are outlined below). While the impact of these events on Oregon's progress toward its VBP goals is not yet known, it is clear that the pandemic substantially changed the context in which future VBP work will occur.

References:

Oregon Health Authority. (2019). Value-Based Payment Roadmap for Coordinated Care Organizations. <https://www.oregon.gov/oha/HPA/dsi-tc/Documents/OHA-CCO-VBP-Roadmap.pdf>

Health Care Payment Learning & Action Network. (2017). Alternative Payment Model (APM) Framework White Paper: Refreshed 2017. <https://hcp-lan.org/apm-refresh-white-paper/>

Behavioral Health Provisions

Additionally, CCO 2.0 contracts provided more direction for CCOs in terms of how integration of physical and behavioral health care was to be executed. In particular, Exhibit M indicated that CCOs could not subcontract with a third party for the provision of behavioral health services, effectively ruling out the subdelegation of the behavioral health benefit. In addition, the contract specified that CCOs should reimburse for behavioral health services rendered in primary care settings and cover physical health services rendered in behavioral health settings. The contract language also specified that multiple services provided on the same day and in the same clinic should be reimbursed.

Background on REALD

Overview

Devising policies and interventions to reduce health inequities necessitates data disaggregated by race, ethnicity, and other demographic characteristics. This Appendix outlines Oregon's efforts to improve collection of these data through implementation of the REALD program.

About REALD

In 2013, Oregon House Bill 2134 directed OHA, in collaboration with Oregon's DHS, to standardize and improve data collection for race, ethnicity, spoken and written language, and disability demographic information. By enhancing the accuracy and granularity of demographic data, the REALD initiative would improve measurement of disparities in health, social needs, and service utilization. This would inform equitable resource allocation to address disparities and improve quality, including the development of accessible, culturally specific and linguistic services. In 2014, standards for REALD data collection were codified in OARs 943-070-0000 through 943-070-0007.

REALD data collection is based on the following core principles:⁵²

- **Self-report.** Individuals self-identify as being from a certain population or subgroup.
- **Active responses.** Respondents must actively choose 'decline' or 'unknown' rather than leaving blanks (passive non-responses).
- **Combine race & ethnicity.** This reduces "missing" and "other" responses, as persons identifying as Latino/a/x may not distinguish between race and ethnicity.
- **Fluidity.** Identities are not fixed; they may change over time. People can acquire new limitations or experience temporary limitations. Responses may vary based on the respondent's relationship with the requestor. In most settings, REALD questions should be asked annually.

Collection of race/ethnicity information relies on three questions⁵³

1. How do you identify your race, ethnicity, tribal affiliation, country of origin, or ancestry?
2. Which of the following describes your racial and ethnic identity? (Respondents may choose from 39 categories.)
3. If you checked more than one category above, is there one you think of as your primary racial or ethnic identity?

Sexual Orientation and Gender Identity data is not currently included in REALD.

OHA's initial efforts on REALD focused on redesigning Oregon's new online benefits eligibility system (OregONEligibility, or ONE), to be fully compliant with REALD standards. The upgraded ONE system launched in June 2017, with REALD data flowing from ONE into the Oregon MMIS. CHSE's analyses showed that the launch of REALD coincided with an increase in both the number and percentage of adult Medicaid recipients for whom race was recorded as unknown/missing/other, with the percentage reaching 40% by 2019. This appears to have been driven largely by a decline in the percentage of enrollees identifying as white or Hispanic. OHA is currently working to improve the quality of REALD data.

REALD and COVID-19

In June 2020, as part of Oregon's COVID-19 response, the Legislature passed House Bill 4212 requiring OHA to establish rules for phased REALD data collection and reporting by providers for COVID-19 encounters. Providers would report these data to OHA as part of COVID-19 disease reporting (including test results, cases, and hospitalizations).⁵⁴ Requirements were effective October 1, 2020 for hospitals, health systems and FQHCs, with health care facilities and providers working with individuals in a congregate setting required to start reporting March 1, 2021.

To support the new requirements, OHA held a series of learning sessions in late 2020 addressing the purpose of REALD, its role in identifying and reducing health inequities, implementation of REALD data collection, and strategies for asking REALD questions, among other topics. OHA also introduced a monthly provider webinar series and is conducting outreach to impacted communities to provide education on REALD data collection and reporting.

In October 2020, OHA also released revised REALD data collection templates. Revisions included the addition of six race/ethnicity categories, allowing individuals to indicate if they do not have a single primary racial or ethnic identity, refinement of language questions to include people who use sign language, additional disabilities questions, and changes to interpreter questions.⁵⁵

Responding to COVID-19

Overview

In 2020 the State of Oregon, OHA, and CCOs undertook a wide range of measures to respond to the needs of patients and providers during the COVID-19 pandemic. This appendix outlines some of these changes. We describe the major changes to Medicaid policies and regulations enacted at the federal and state levels, OHA's actions to support CCOs and providers, as well as the state's intensified focus on health equity. The summative evaluation (featuring data through 2021) will assess some of the ways in which COVID-19 and the state's pandemic response affected Oregon's progress and goals set out in the 2017-2022 waiver renewal.

COVID-19 in Oregon

The first confirmed case of COVID-19 in Oregon was reported on February 28, 2020. On March 8, 2020, Governor Brown issued Executive Order 20-03, declaring COVID-19 a public health emergency under ORS 401.025(1) and calling for immediate action by OHA and other state agencies to respond to the virus' spread in Oregon. Oregon's daily reported cases stayed relatively low (below 100) through the Spring of 2020, aided by various infection control measures, including business and school closures, limitations on social gatherings, workplace restrictions, and a statewide "stay at home" order effective March 23, 2020. Governor Brown gradually lifted the "Stay Home, Save Lives" executive order beginning in May 2020, introducing a phased system whereby counties had to meet benchmarks for COVID-19 prevalence and hospitalization to further loosen restrictions. The state also introduced requirements for face coverings in indoor public spaces. These rules gradually expanded from a few counties to statewide and included outdoor spaces, workplaces, and educational institutions. Despite these measures, daily incident cases climbed in June 2020 to an initial peak of 409 in July, with a second wave beginning to build in September 2020 and peaking at over 1,600 daily cases by late December 2020. (Case rates began declining again in January 2021.) By late February 2021, Oregon had reached more than 150,000 reported cases, 8,500 hospitalizations, and 2,100 deaths from COVID-19. Mirroring trends nationwide, the disease disproportionately affected communities of color and tribes, leading to substantially higher rates of cases, severity, and deaths in these populations. For example, by February 2021, Latino/a/x individuals (roughly 13% of Oregon's population) accounted for 26% of total cases and 9.3% of deaths. Adjusted for age, case and death rates were more than three times higher for Latino/a/x individuals compared with others, and more than double for the Black community compared with the white community.⁵⁶

In addition to its tremendous human toll, the pandemic caused widespread disruption to the state's health care delivery system, including substantial adverse financial impacts for providers. With looming shortages in personal protective equipment, Governor Brown ordered the cancellation of elective and non-urgent procedures (effective March 23, 2020) across all care settings until June 15, 2020.⁵⁷ Patient concern about infection risk further reduced preventive and other routine care visits. Capacity limitations due to social distancing requirements led to sharp revenue declines for residential behavioral health providers.

Federal Legislation

The U.S. Congress enacted several pieces of legislation to respond to the COVID-19 emergency, including the Families First Coronavirus Response Act (HR6201) and the Coronavirus Aid, Relief and Economic Security (CARES) Act (HR748), which impacted Medicaid programs nationwide in a number of ways outlined below. CMS also issued revisions to Medicare and Medicaid regulations to offer additional assistance to health care providers and ensure enrollees' access to needed services.

The Families First Coronavirus Response Act, effective March 18, 2020 and amended by the CARES Act, contained a number of provisions impacting Medicaid, including:

- A temporary increase in the federal matching rate (FMAP) of 6.2 percentage points (not applicable to Medicaid expansion populations).
- Coverage for COVID-19 testing without cost sharing.
- An option for states to use Medicaid to pay for COVID-19 testing for uninsured individuals.

To qualify for the FMAP increase, state Medicaid programs could not terminate enrollment for any reason unless the person moved out of state or requested voluntary disenrollment.

The CARES Act, signed into law on March 27, 2020, contained provisions for increased unemployment benefits, stimulus payments to individuals and families, support for small businesses and assistance to sectors of the U.S. economy severely impacted by the pandemic. Health-related provisions of the Act included:⁵⁸

- Expanded coverage of telehealth services and grants to fund greater use of these services.
- Reauthorization of multiple programs such as Temporary Assistance for Needy Families, the Healthy Start Program, and rural community health programs.
- More than \$242 billion in appropriations for health-related programs and entities, such as food assistance programs, the Federal Emergency Management Agency, the Centers for Disease Control and Prevention, the National Institutes of Health, the Substance Abuse and Mental Health Services Administration, CMS, and the Department of Health and Human Services (including \$100 billion for reimbursing hospitals and other health care entities for extraneous expenses and lost revenues attributable to the coronavirus).

1135 Waivers

During a public health emergency (PHE), states are allowed to seek additional flexibilities in Medicaid delivery under Section 1135 of the Social Securities Act. During the course of 2020, Oregon obtained a series of Section 1135 flexibilities intended broadly to ensure adequate availability of services for Medicaid enrollees and support providers' financial viability.⁵⁹ Effective retroactively from March 1, 2020 and through the duration of the PHE, these waivers authorized the following changes to OHP:⁶⁰

- Temporary suspension of Medicaid FFS prior authorization requirements.
- Extension of pre-existing authorizations for procedures which were delayed due to COVID-19 restrictions.
- Suspension of nursing facility pre-admission screening and annual review assessments for nursing home residents.
- Extension of timeframe for enrollees to request a fair hearing for eligibility or FFS appeals.

- Temporary enrollment of out-of-state providers who are enrolled with another State Medicaid Agency.
- Full reimbursement for services provided in alternative settings (unlicensed facilities).

CMS also approved multiple Section 1135 flexibilities relating to home- and community-based services (HCBS) provided under the 1915(k) state plan benefit, the 1915(i) HCBS state plan benefit, and the 1915(c) HCBS waiver program. These included extended timeframes for eligibility determinations, care needs assessments and re-assessments, and allowing for provision of services in alternative settings.⁶¹

Some of these changes may be continued beyond the expiration of the PHE.

State Plan Amendments

To further assist the state's response to COVID-19, Oregon applied for State Plan Amendments (SPAs) to implement temporary changes to Medicaid provider requirements and reimbursement rates. Changes approved by CMS via SPAs included:

- Higher FFS rates (equivalent to face-to-face encounters) for telehealth visits with established patients.⁶²
- Temporary changes to the 1915(k) Community First Choice⁶³, 1915(j) Independent Choices⁶⁴ and 1915(i) Home and Community-Based Services programs.⁶⁵
- Telehealth (point-of-service code 2) reimbursed at non-facility RVU rate regardless of the provider's entity type.⁶⁶
- Payments for telehealth services not otherwise paid under the Medicaid state plan.⁶⁷
- Waiver of day supply limits for outpatient drugs when appropriate to reduce risk, with early refills allowed for a 2-week reserve supply.⁶⁸
- Automatic renewal of prior authorization for medications.⁶⁹
- Authorization for contracted Community Partner organizations to perform presumptive eligibility determinations.⁷⁰
- Reserve Service Capacity payments to mental health and substance use disorder residential treatment providers.⁷¹
- Enhanced and supplemental payments to Tribal 638, Urban Indian Health, and Indian Health Service programs.⁷²
- 10% increase in rates for nursing facilities, assisted living facilities and residential care facilities.⁷³
- Contracted FFS providers may apply for interim stability payments to help them stay in business; payment equal to average monthly FFS billing to OHA in 2019.⁷⁴
- Provider reimbursement for use of qualified interpreters for non-English speaking members and/or deaf/hard of hearing members.⁷⁵

SPA changes went into effect in March 2020 and will expire on the last day of the PHE unless the state obtains CMS approval for their extension. OHA and ODHS are currently planning to request a continuation of some of these changes, including the updated reimbursement policies for telehealth and interpretation services.

OHA's Actions to Support CCOs and Providers

OHA and CCOs were an essential point of response to the COVID-19 pandemic. This section outlines some of the actions taken by OHA and CCOs to respond to the needs of Medicaid members and providers.

Telehealth Guidance

To accompany the expanded coverage for telehealth services, OHA issued new guidance to CCOs and OHP providers on increasing access to physical, behavioral, and oral telehealth services. While reimbursement rates could vary, OHA directed CCOs to reimburse telehealth services “on par” with in-person services.⁷⁶ Consistent with new guidelines from the Health Evidence Review Commission, OHA encouraged the use of telehealth services for new and existing patients for all services that can “reasonably approximate” an in-person visit, not just COVID-related services, and introduced additional billing code options.⁷⁷ Providers could use various delivery models (e.g., two-way video, telephone, email, text) and platforms, including non-HIPAA compliant platforms if needed. (HHS waived HIPAA requirements for telehealth during the pandemic.⁷⁸) CCOs were asked to develop communications materials on telehealth services for beneficiaries in multiple languages and submit these for OHA approval.⁷⁹

Changes to the CCO Quality Incentive Program

As part of its efforts to financially support providers through the crisis, OHA in March 2020 released early payments to CCOs from the 2019 quality pool. CCOs typically use quality pool awards to pay providers based on quality performance, VBP strategies, and other contractual arrangements. Each CCO received an advance payment equal to 60% of its allowable quality pool funds, for a total of \$98 million. The remaining 40% was paid out in June 2020 based on CCOs' individual performance in 2019.⁸⁰

Beginning in April 2020, OHA suspended the 2020 quality withhold for the duration of the public health emergency. Under 2020 CCO contracts, this withhold was 4.25% of each CCO's monthly capitation revenue. OHA estimated a resulting cash infusion to CCOs of around \$17 million per month.⁸¹ Funds withheld in January through March 2020 will be available for the 2020 quality pool to be distributed in June 2021.

CCOs were required to report details of their spending of the 2019 quality pool and withhold dollars to OHA, including amounts distributed by recipient. All CCOs reported paying these funds to their provider networks, although the types of providers targeted and conditions for payment varied. CCOs generally sought to compensate providers for decreased FFS revenues. These payments could include, for example, payments based on historical FFS spending, pre-payment of incentive funds, or new capitation arrangements. CCOs also reported engaging in discussions with FFS providers about the benefits of capitation and other VBP arrangements in reducing utilization-related revenue volatility.⁸² Additionally, CCOs used the flexibility of HRS to help their members adapt to the challenges of COVID-19. We describe these initiatives further in Chapter 6.

In July 2020, OHA's Metrics & Scoring Committee voted to make all 2020 CCO incentive measures “reporting only” because data from 2020 could not be meaningfully used to assess quality improvement. Thus, the 2020 quality pool payments will not be subject to CCOs' achievement of benchmarks or improvement targets. Early evidence suggests many CCOs used this emergency flexibility to support providers, converting performance-based contracts to “reporting only” in 2020. In October 2020, the Committee decided to use 2019 as the baseline for assessing quality improvement in 2021, rolling forward initial 2020 benchmarks to 2021. Benchmarks for 2021 could

be reassessed in the presence of extenuating external factors, as defined by a set of predetermined criteria related to school/county reopening, the Governor's state of emergency, closure of medical/dental facilities, suspension of elective procedures, and preventive visits, COVID cases, and OHP telemedicine coverage.⁸³

Renewed Focus on Health Equity

With communities of color and tribal communities disproportionately affected by the pandemic, COVID-19 laid bare the health system's inequities.⁸⁴ Health equity, which was already a focus in CCO 2.0, emerged as a central priority for the state and the CCO model. Calls for racial justice in the Black Lives Matter movement further highlighted systemic racism and oppression as key drivers of health inequities, both indirectly via social determinants (e.g., housing, income, neighborhood environment, educational outcomes), and directly through chronic stress/trauma, lack of access to culturally responsive services, and general distrust in the health care system. The events of 2020 prompted a reinforced commitment to health equity among Oregon's health care system leaders and stakeholders.

Oregon has a long history of racial discrimination, including discriminatory laws and ordinances, housing, labor and school segregation, and racial violence.⁸⁵ In 1850, the federally enacted Oregon Donation Land Act prevented non-whites from claiming land in Oregon even if they had already settled there. Oregon's constitution (effective in 1859) explicitly barred Black people from residing in the state until 1926. Throughout the 20th century, the City of Portland implemented racist land use planning practices which excluded Black people and other unjustly treated racial and ethnic groups from homeownership. These policies were associated with housing segregation, displacement, and exclusion from educational and economic opportunities.⁸⁶ A 2010 report on communities of color in Multnomah County found large racial and ethnic disparities in measures of poverty, educational attainment, health, preschool access, labor market outcomes, child welfare, and juvenile detention rates. The report attributed these disparities to "institutional, ideological, behavioral and historic racism."⁸⁷

Accurate demographic data are necessary to identify and assess inequities and resulting health disparities. In 2013, the Oregon legislature passed House Bill 2134 directing OHA and ODHS to standardize and improve the way race, ethnicity, spoken and written language, and disability (REALD) demographics are collected in agency datasets. Implementing this protocol is an important step to reduce health inequities. Appendix E provides additional information on REALD. In June 2020, as part of Oregon's COVID-19 response, the Legislature passed House Bill 4212, requiring OHA to establish rules for phased REALD data collection and reporting by providers for COVID-19 encounters. Providers would report these data to OHA as part of COVID-19 disease reporting (including test results, cases, and hospitalizations).⁸⁸ Requirements were effective October 1, 2020 for hospitals, health systems and Federally Qualified Health Centers (FQHCs), with health care facilities and providers working with individuals in a congregate setting required to start reporting March 1, 2021.

In the fall of 2020, as part of its renewed commitment to addressing health inequity and the passage of House Bill 4212, OHA significantly increased technical assistance and outreach to providers on REALD implementation. OHA also released revised REALD data collection templates intended to facilitate accurate data collection.

Supplemental Results

Screening, Brief Intervention, and Referral to Treatment

Table G.1 provides outcomes for Screening, Brief Intervention, and Referral to Treatment (SBIRT) for 2019 based on EHR data received from OHA. The collection of data for this measure has changed over time, so we were unable to assess changes during the waiver renewal. We calculated two rates describing screening and brief intervention/referral, respectively:

- **Rate 1:** Percentage of members 12 years and older who received an age-appropriate screening for alcohol or other substance abuse.
- **Rate 2:** Percentage of members who screened positive for alcohol or other substance abuse and received a brief intervention or referral to treatment.

Table G.1: SBIRT Results for 2019

| CCO | Rate 1 | Rate 2 |
|------------------------------------|--------|--------|
| Advanced Health | 67.1% | 1.3% |
| AllCare CCO | 23.9% | 57.3% |
| Cascade Health Alliance | 35.6% | 93.2% |
| Columbia Pacific | 78.2% | 13.1% |
| Eastern Oregon CCO | 69.3% | 58.2% |
| Health Share of Oregon | 65.7% | 25.7% |
| InterCommunity Health Network | 50.2% | 85.4% |
| Jackson Care Connect | 46.7% | 26.1% |
| PacificSource Central | 56.6% | 11.0% |
| PacificSource Gorge | 54.3% | 10.4% |
| Primary Health of Josephine County | 47.0% | 24.2% |
| Trillium Community Health Plan | 68.7% | 31.0% |
| Umpqua Health Alliance | 44.9% | 49.6% |
| Willamette Valley Community Health | 73.9% | 28.0% |
| Yamhill Community Care | 80.5% | 12.6% |
| Statewide | 62.8% | 42.8% |

Assessing the Impacts of a CCO Closure

In 2018, Oregon transitioned from 16 CCOs to 15 CCOs. FamilyCare became a CCO in 2012 serving approximately 115,000 enrollees in Washington, Multnomah, Clackamas, and Marion counties. It shut its doors on January 31, 2018. With its closure, the majority of members were expected to transition into Health Share of Oregon. FamilyCare members in Marion County were to transition into Willamette Valley Community Health, while those in the Gaston area of Washington County

were to transition into Yamhill Community Care. FamilyCare members who were also members of a tribe were not transitioned into a new CCO. They would remain in the FFS program but could choose to enroll in a CCO in their area.

One concern is that the disruption at the FamilyCare level could confound overall changes otherwise attributable to the CCO model. In order to disentangle the effects of the CCO model from changes in the market, we conducted sub-analyses of the markets where CCO representation remained stable through 2019. Specifically, we compared differences in outcomes across the state and in the tri-county area (Washington, Multnomah, and Clackamas) area, using the following equation:

$$Y_{it} = m(b_0 + b_1*d2019_t + b_2*TriCounty_i + b_3* TriCounty_i *d2019+ a*X_{it} + e_{it}) \quad (1)$$

Where $TriCounty_i$ takes a value of 1 if the individual resides in the tri-county area. The coefficient b_3 captures the difference between the 2016-2019 change in the tri-county region compared to other regions of the state (difference-in-differences; “DID”). For example, a negative, statistically significant coefficient would indicate that any improvement in the outcome Y_{it} between 2016 and 2019 was smaller in the tri-county area.

We report results for behavioral health measures in Figures G.1 through G.17 below. We found that for most behavioral health measures, the 2016-2019 change was no different or modestly greater (indicating greater improvement) for enrollees in the tri-county area. One area to monitor is total spending, which increased slightly more for individuals in the tri-county area. This difference could reflect increased service use - possibly beneficial for these enrollees - or challenges in managing the costs associated with the transition. With this exception, we did not find evidence in the claims-based measures that outcomes had worsened for enrollees in the tri-county area following the departure of FamilyCare.

For oral health, changes from 2016 to 2019 were no different or slightly greater (indicating greater improvement) in the tri-county area relative to other areas (see Figures G.18 through G.28). For example, ED visits for non-traumatic dental conditions declined more markedly in the tri-county area. An exception was Dental Sealants on Permanent Molars for Children, which improved less in the tri-counties, although from a higher 2016 baseline. The increase in spending on dental services outside the ED was slightly smaller for CCO enrollees in the tri-county area, although baseline spending was higher. Overall, these results suggest that for most members, the departure of FamilyCare did not adversely affect oral health services.

Figure G.1: The 2016-2019 change in ED utilization for members with behavioral health conditions did not differ significantly for tri-county versus non tri-county residents

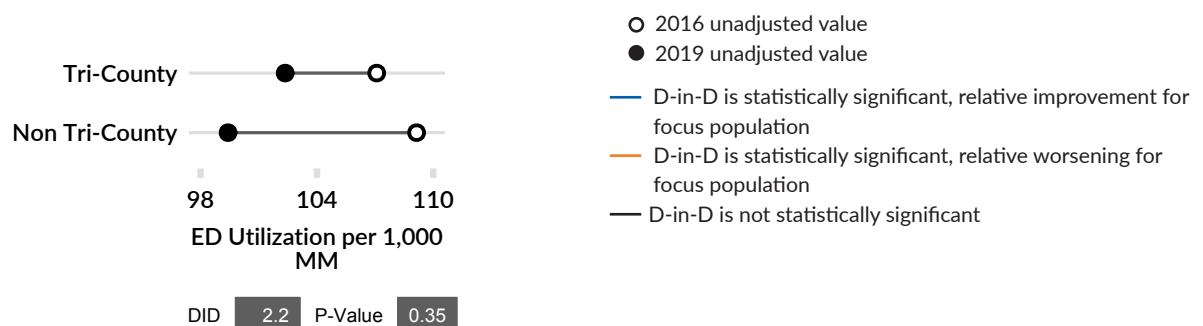


Figure G.2: The 2016-2019 change in potentially avoidable ED visits for members with behavioral health conditions did not differ significantly for tri-county versus non tri-county residents

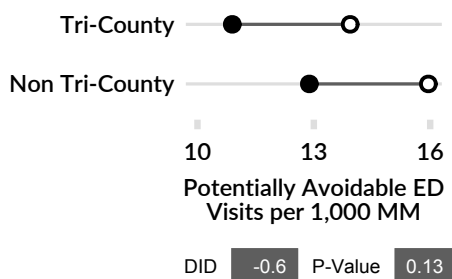


Figure G.3: Rates of glucose for testing for members using 2nd gen. antipsychotic medications increased slightly more for tri-county residents than for non-tri-county residents from 2016 to 2019

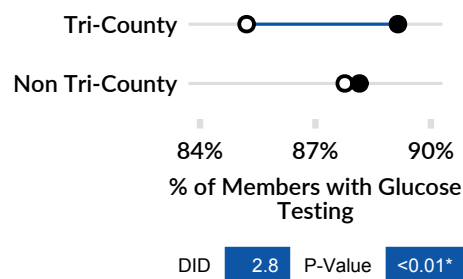


Figure G.4: The 2016-2019 change in lipid testing for members using 2nd gen. antipsychotic medications did not differ significantly for tri-county versus non tri-county residents

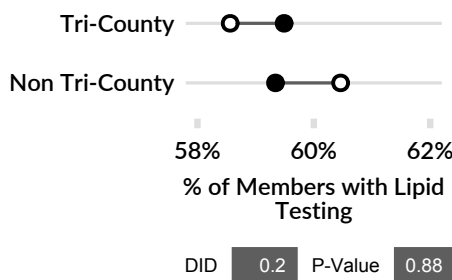


Figure G.5: Changes from 2016 to 2019 in the rate of follow-up within 30 days after hospitalization for mental illness did not differ significantly for tri-county residents compared to non tri-county residents

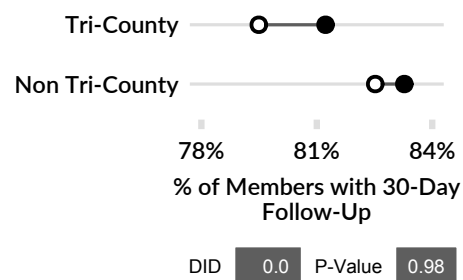
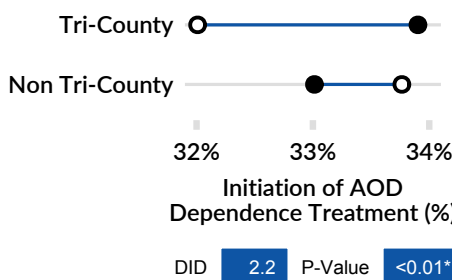


Figure G.6: The rate of initiation of AOD dependence treatment increased slightly more for tri-county residents than for non tri-county residents from 2016 to 2019



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Figure G.7: The rate of engagement in AOD dependence treatment increased slightly more for tri-county residents than for non tri-county residents from 2016 to 2019

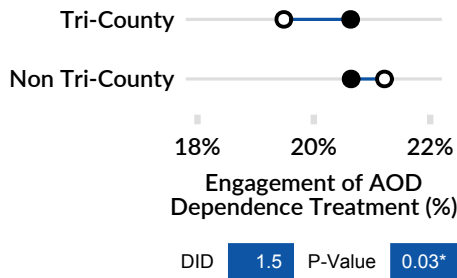


Figure G.8: The increase from 2016 to 2019 in the percentage of members with SUD was slightly smaller for tri-county residents compared to non tri-county residents

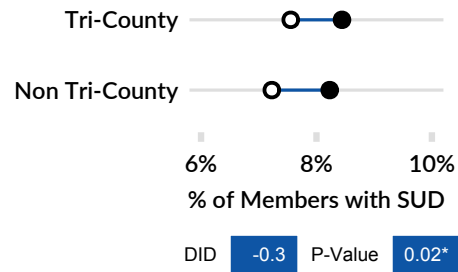


Figure G.9: The 2016-2019 increase in outpatient visits for behavioral health care was greater for tri-county residents compared to non tri-county residents

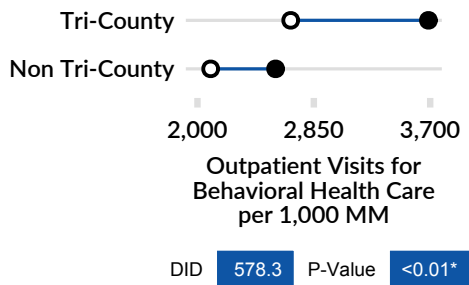


Figure G.10: The 2016-2019 increase in outpatient visits for non-behavioral health care was greater for tri-county residents compared to non tri-county residents

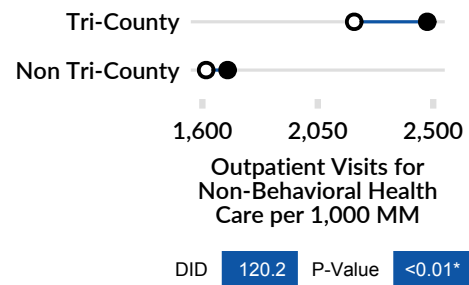
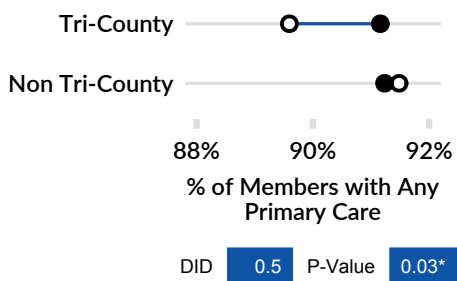


Figure G.11: The 2016-2019 increase in primary care access for members with behavioral health conditions was slightly greater for tri-county residents compared to non tri-county residents



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Figure G.12: The 2016-2019 increase in preventive-ambulatory services access for members with behavioral health conditions was slightly greater for tri-county residents compared to non tri-county residents

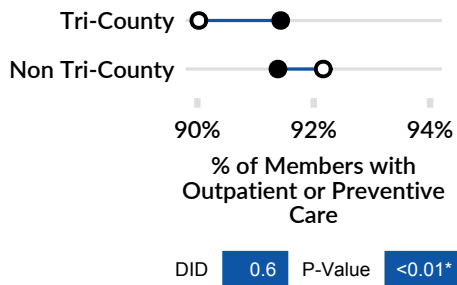


Figure G.13: The 2016-2019 increase in primary care spending was slightly greater for tri-county residents compared to non tri-county residents

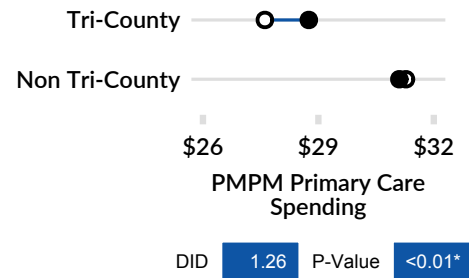


Figure G.14: The 2016-2019 increase in ED spending was greater for tri-county residents compared to non tri-county residents

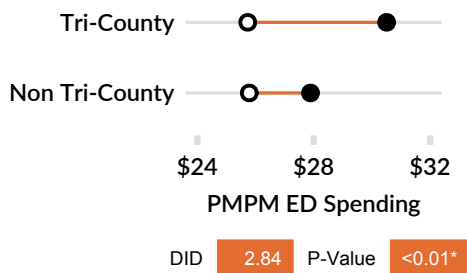


Figure G.15: The 2016-2019 change in inpatient facility spending was not significantly different for tri-county residents compared to non tri-county residents

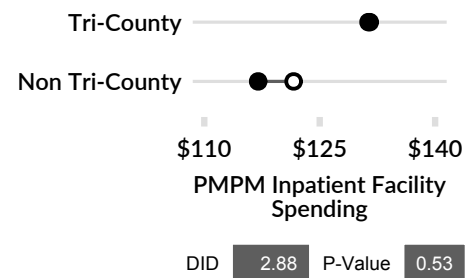
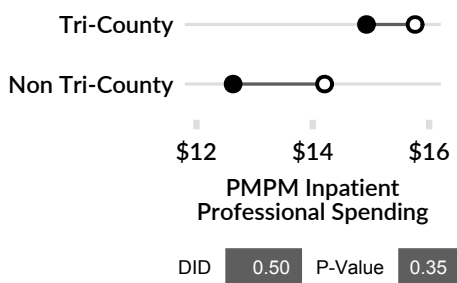


Figure G.16: The 2016-2019 change in inpatient professional spending was not significantly different for tri-county residents compared to non tri-county residents



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Figure G.17: The 2016-2019 increase in total spending was slightly greater for tri-county residents compared to non tri-county residents

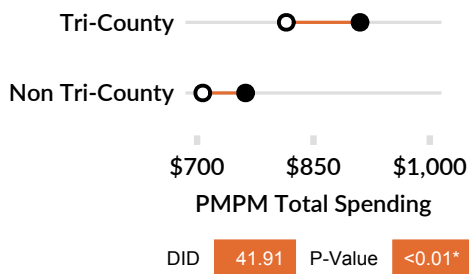


Figure G.18: The 2016-2019 change in ED visits for traumatic dental conditions was not significantly different for tri-county residents compared to non tri-county residents

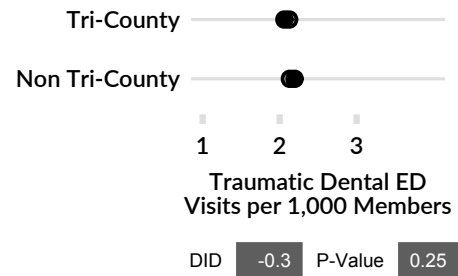


Figure G.19: The 2016-2019 decrease in ED visits for non-traumatic dental conditions was greater for tri-county residents compared to non tri-county residents

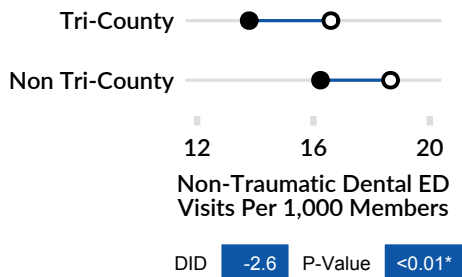


Figure G.20: The 2016-2019 increase in access to dental procedures was slightly greater for tri-county residents compared to non tri-county residents

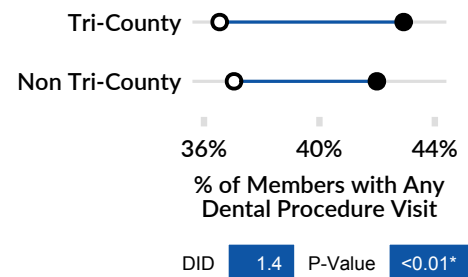
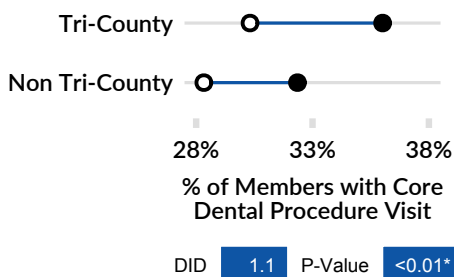


Figure G.21: The 2016-2019 increase in access to core dental procedures was slightly greater for tri-county residents compared to non tri-county residents



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Figure G.22: The 2016-2019 increase in dental procedure visits was slightly greater for tri-county residents compared to non tri-county residents

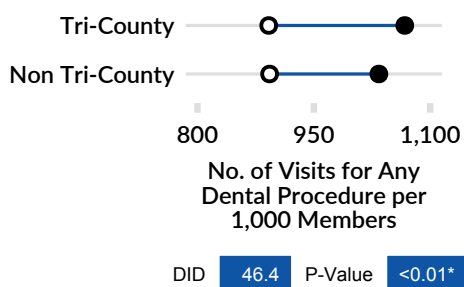


Figure G.23: The 2016-2019 increase in core dental procedure visits was slightly greater for tri-county residents compared to non tri-county residents

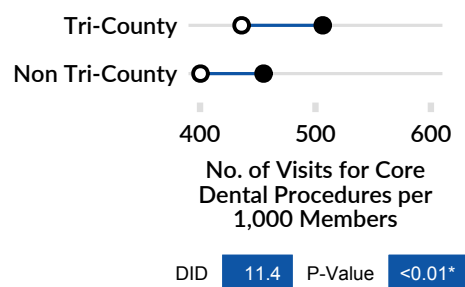


Figure G.24: The 2016-2019 increase in rates of dental sealants for permanent molars for children was smaller for tri-county residents compared to non tri-county residents

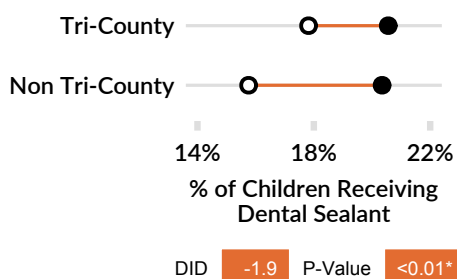


Figure G.25: The 2016-2019 increase in access to dental procedures for members with a chronic condition was slightly greater for tri-county residents compared to non tri-county residents

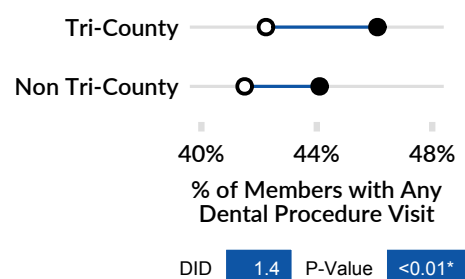
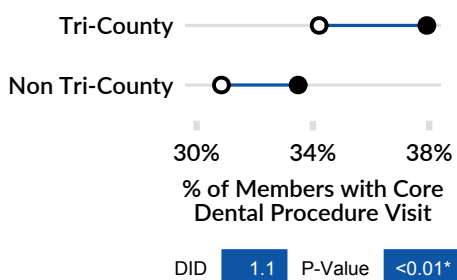
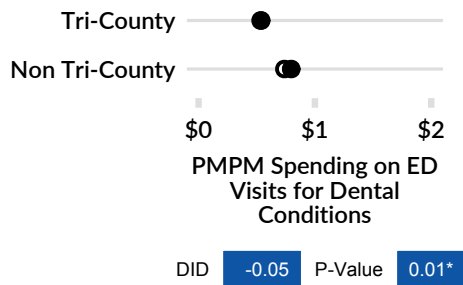


Figure G.26: The 2016-2019 increase in access to core dental procedures for members with a chronic condition was slightly greater for tri-county residents compared to non tri-county residents



- 2016 unadjusted value
- 2019 unadjusted value
- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

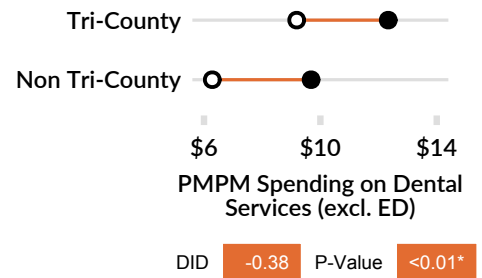
Figure G.27: Spending on ED visits for dental conditions decreased slightly for tri-county residents relative to non tri-county residents between 2016 and 2019



○ 2016 unadjusted value
● 2019 unadjusted value

- D-in-D is statistically significant, relative improvement for focus population
- D-in-D is statistically significant, relative worsening for focus population
- D-in-D is not statistically significant

Figure G.28: The 2016-2019 increase in spending on dental services excluding ED visits was slightly smaller among tri-county residents compared to non tri-county residents



HRS Expenditures

Tables G.2-G.6 display annual spending on HRS, as reported by CCOs in Exhibit L submissions. Table G.2 contains aggregate CCO spending by year for 2014-2019. Tables G.3 and G.4 show total and PMPM spending by CCO and HRS type (flexible services, community benefit initiative, health IT), for 2018 and 2019. Monthly flexible services spending per 1,000 members by category can be found in Table G.5. Finally, we present in Table G.6 and Figure G.29 annual flexible services spending per recipient, percentage of annual members who were flexible services recipients, and distribution of per-recipient flexible services spending by category.

Table G.2: Health-Related Services Spending by Year, 2014-2019

| Year | HRS Total (\$) | HRS PMPM (\$) | HRS % of Member Services Spending |
|------|----------------|---------------|-----------------------------------|
| 2014 | 1,038,590 | 0.11 | 0.03 |
| 2015 | 2,484,966 | 0.24 | 0.07 |
| 2016 | 7,213,874 | 0.66 | 0.17 |
| 2017 | 5,689,636 | 0.55 | 0.14 |
| 2018 | 11,193,764 | 1.08 | 0.27 |
| 2019 | 16,163,747 | 1.51 | 0.36 |

Note: 2018 and 2019 spending data was reviewed and approved by OHA. 2014-2017 spending data was not subject to review.

Table G.3: Total Health-Related Services Spending (\$) by Type and CCO, 2018-2019

| Year | CCO | Health-Related Services Total | Type of Spending | | |
|------|------------------------------------|-------------------------------|-------------------|------------------------------|-------------------------------|
| | | | Flexible Services | Community Benefit Initiative | Health Information Technology |
| 2018 | Advanced Health | 136,730 | - | 136,730 | - |
| | AllCare CCO | 1,459,262 | 335,178 | 1,124,084 | - |
| | Cascade Health Alliance | 882,275 | 122,094 | 760,181 | - |
| | Columbia Pacific | 143,121 | 925 | 142,196 | - |
| | Eastern Oregon CCO | 29,210 | 28,202 | 1,008 | - |
| | Health Share of Oregon | 3,103,269 | 258,322 | 2,844,947 | - |
| | InterCommunity Health Network | - | - | - | - |
| | Jackson Care Connect | 1,511,175 | 1,133,678 | 377,497 | - |
| | PacificSource Central | - | - | - | - |
| | PacificSource Gorge | - | - | - | - |
| | Primary Health of Josephine County | 40,278 | 35,974 | 4,304 | - |
| | Trillium Community Health Plan | 2,099,762 | 110,845 | 1,988,917 | - |
| | Umpqua Health Alliance | 1,192,115 | 50,186 | 1,141,930 | - |
| | Willamette Valley Community Health | 30,082 | 30,082 | - | - |
| | Yamhill Community Care | 566,484 | 318,191 | 248,294 | - |
| | All | 11,193,764 | 2,423,677 | 8,770,087 | - |
| 2019 | Advanced Health | 526,357 | 12,854 | 513,503 | - |
| | AllCare CCO | 1,570,634 | 496,038 | 1,034,596 | 40,000 |
| | Cascade Health Alliance | 224,683 | 29,722 | 194,961 | - |
| | Columbia Pacific | 1,461,059 | 8,631 | 1,452,428 | - |
| | Eastern Oregon CCO | 89,284 | 55,229 | 34,055 | - |
| | Health Share of Oregon | 2,716,625 | 874,810 | 1,074,842 | 766,973 |
| | InterCommunity Health Network | 956,546 | - | 580,785 | 375,761 |
| | Jackson Care Connect | 1,044,211 | 482,030 | 523,904 | 38,276 |
| | PacificSource Central | 113,254 | 113,254 | - | - |
| | PacificSource Gorge | 540,260 | 81,365 | 458,895 | - |
| | Primary Health of Josephine County | 108,979 | 89,802 | 19,177 | - |
| | Trillium Community Health Plan | 2,308,466 | 163,762 | 2,144,704 | - |
| | Umpqua Health Alliance | 3,330,102 | 102,535 | 417,784 | 2,809,783 |
| | Willamette Valley Community Health | 47,570 | 47,570 | - | - |
| | Yamhill Community Care | 1,125,717 | 395,482 | 730,235 | - |
| | All | 16,163,747 | 2,953,084 | 9,179,869 | 4,030,794 |

Table G.4: PMPM Health-Related Services Spending (\$) by Type and CCO, 2018-2019

| Year | CCO | Health-Related Services Total | Type of Spending | | |
|------|------------------------------------|-------------------------------|-------------------|------------------------------|-------------------------------|
| | | | Flexible Services | Community Benefit Initiative | Health Information Technology |
| 2018 | Advanced Health | 0.61 | - | 0.61 | - |
| | AllCare CCO | 2.48 | 0.57 | 1.91 | - |
| | Cascade Health Alliance | 4.40 | 0.61 | 3.79 | - |
| | Columbia Pacific | 0.48 | - | 0.47 | - |
| | Eastern Oregon CCO | 0.05 | 0.05 | - | - |
| | Health Share of Oregon | 0.84 | 0.07 | 0.77 | - |
| | InterCommunity Health Network | - | - | - | - |
| | Jackson Care Connect | 4.04 | 3.03 | 1.01 | - |
| | PacificSource Central | - | - | - | - |
| | PacificSource Gorge | - | - | - | - |
| | Primary Health of Josephine County | 0.35 | 0.31 | 0.04 | - |
| | Trillium Community Health Plan | 1.92 | 0.10 | 1.82 | - |
| | Umpqua Health Alliance | 3.83 | 0.16 | 3.67 | - |
| | Willamette Valley Community Health | 0.02 | 0.02 | - | - |
| | Yamhill Community Care | 1.91 | 1.07 | 0.84 | - |
| | All | 1.08 | 0.23 | 0.84 | - |
| 2019 | Advanced Health | 2.21 | 0.05 | 2.16 | - |
| | AllCare CCO | 2.60 | 0.82 | 1.71 | 0.07 |
| | Cascade Health Alliance | 1.04 | 0.14 | 0.90 | - |
| | Columbia Pacific | 4.74 | 0.03 | 4.71 | - |
| | Eastern Oregon CCO | 0.15 | 0.09 | 0.06 | - |
| | Health Share of Oregon | 0.71 | 0.23 | 0.28 | 0.20 |
| | InterCommunity Health Network | 1.39 | - | 0.85 | 0.55 |
| | Jackson Care Connect | 2.72 | 1.25 | 1.36 | 0.10 |
| | PacificSource Central | 0.19 | 0.19 | - | - |
| | PacificSource Gorge | 3.73 | 0.56 | 3.17 | - |
| | Primary Health of Josephine County | 0.89 | 0.74 | 0.16 | - |
| | Trillium Community Health Plan | 2.08 | 0.15 | 1.93 | - |
| | Umpqua Health Alliance | 10.29 | 0.32 | 1.29 | 8.68 |
| | Willamette Valley Community Health | 0.04 | 0.04 | - | - |
| | Yamhill Community Care | 3.75 | 1.32 | 2.44 | - |
| | All | 1.51 | 0.28 | 0.86 | 0.38 |

Table G.5: Monthly Flexible Services Spending (\$) per 1,000 Members, by Category and CCO, 2018-2019

| Year | CCO | Flexible Services Total | Category of Spending | | | | | | |
|------|------------------------------------|-------------------------|----------------------|-------|----------------|---------------------|------|-----------------|-------------|
| | | | Housing | Other | Transportation | Training/ Education | Home | Case Management | Food/Social |
| 2018 | Advanced Health | - | - | - | - | - | - | - | - |
| | AllCare CCO | 570 | 33 | 0.1 | 481 | 47 | 4 | 5 | - |
| | Cascade Health Alliance | 609 | - | - | - | 570 | 25 | - | 14 |
| | Columbia Pacific | 3 | - | - | - | 2 | - | 1 | 0.3 |
| | Eastern Oregon CCO | 50 | - | - | - | - | 50 | - | - |
| | Health Share of Oregon | 70 | 14 | 10 | 1 | 7 | 3 | 31 | 3 |
| | InterCommunity Health Network | - | - | - | - | - | - | - | - |
| | Jackson Care Connect | 3,031 | 1,533 | - | 396 | 748 | 118 | 217 | 18 |
| | PacificSource Central | - | - | - | - | - | - | - | - |
| | PacificSource Gorge | - | - | - | - | - | - | - | - |
| | Primary Health of Josephine County | 313 | - | - | 1 | 307 | - | 1 | 4 |
| | Trillium Community Health Plan | 102 | - | 100 | - | - | 2 | - | - |
| | Umpqua Health Alliance | 161 | - | - | 156 | 5 | - | - | - |
| | Willamette Valley Community Health | 25 | 14 | - | - | 4 | 5 | 2 | 0.4 |
| | Yamhill Community Care | 1,072 | 46 | 4 | 2 | 489 | - | 532 | - |
| | All | 233 | 77 | 17 | 55 | 72 | 11 | 41 | 3 |
| 2019 | Advanced Health | 54 | 10 | 39 | 5 | - | - | - | - |
| | AllCare CCO | 821 | 53 | 0.3 | 709 | - | 7 | 16 | 37 |
| | Cascade Health Alliance | 137 | - | 26 | - | 81 | 25 | - | 5 |
| | Columbia Pacific | 28 | 17 | - | - | 2 | 5 | 2 | 2 |
| | Eastern Oregon CCO | 91 | 7 | 13 | 0.2 | - | 68 | 2 | - |
| | Health Share of Oregon | 227 | 165 | 9 | 5 | 14 | 26 | 2 | 7 |
| | InterCommunity Health Network | - | - | - | - | - | - | - | - |
| | Jackson Care Connect | 1,255 | 361 | 769 | - | 2 | 122 | 0.2 | - |
| | PacificSource Central | 194 | 64 | - | 8 | 87 | 35 | - | - |
| | PacificSource Gorge | 561 | 15 | 5 | 24 | 455 | 63 | - | - |
| | Primary Health of Josephine County | 736 | 1 | 1 | 2 | 699 | - | 29 | 5 |
| | Trillium Community Health Plan | 148 | 0 | 147 | - | 0.1 | 0.3 | 0.0 | - |
| | Umpqua Health Alliance | 317 | 62 | 9 | 225 | - | 20 | - | 1 |
| | Willamette Valley Community Health | 39 | 22 | 5 | 1 | 2 | 5 | 4 | - |
| | Yamhill Community Care | 1,319 | 49 | 88 | 3 | 682 | 38 | 458 | - |
| | All | 276 | 92 | 55 | 53 | 48 | 25 | 16 | 5 |

Table G.6: Annual Flexible Services Spending per Recipient (\$) and Percentage of Members Receiving Flexible Services, by CCO, 2018-2019

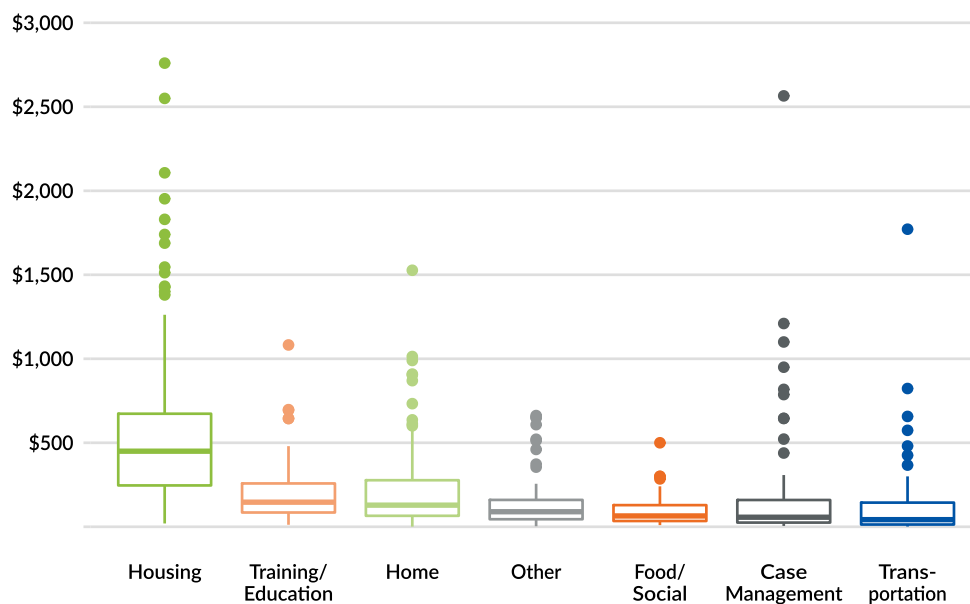
| Year | CCO | Amount (\$) per FS Recipient | % of Members Receiving FS |
|------|------------------------------------|------------------------------|---------------------------|
| 2018 | Advanced Health | - | - |
| | AllCare CCO | 48 | 12.3 |
| | Cascade Health Alliance | 224 | 2.7 |
| | Columbia Pacific | 18 | 0.2 |
| | Eastern Oregon CCO | 128 | 0.4 |
| | Health Share of Oregon | 19 | 3.6 |
| | InterCommunity Health Network | - | - |
| | Jackson Care Connect | 56 | 57.0 |
| | PacificSource Central | - | - |
| | PacificSource Gorge | - | - |
| | Primary Health of Josephine County | 24 | 13.1 |
| | Trillium Community Health Plan | 26 | 4.2 |
| | Umpqua Health Alliance | 177 | 0.9 |
| | Willamette Valley Community Health | 241 | 0.1 |
| | Yamhill Community Care | 573 | 2.0 |
| | All | 50 | 5.6 |
| 2019 | Advanced Health | 169 | 0.3 |
| | AllCare CCO | 44 | 19.2 |
| | Cascade Health Alliance | 97 | 1.4 |
| | Columbia Pacific | 141 | 0.2 |
| | Eastern Oregon CCO | 80 | 1.1 |
| | Health Share of Oregon | 273 | 0.8 |
| | InterCommunity Health Network | - | - |
| | Jackson Care Connect | 87 | 14.6 |
| | PacificSource Central | 201 | 0.9 |
| | PacificSource Gorge | 250 | 2.3 |
| | Primary Health of Josephine County | 63 | 11.8 |
| | Trillium Community Health Plan | 31 | 4.9 |
| | Umpqua Health Alliance | 251 | 1.3 |
| | Willamette Valley Community Health | 445 | 0.1 |
| | Yamhill Community Care | 297 | 4.5 |
| | All | 97 | 3.1 |

Note: "All" rows contain the overall amounts and percentages among CCOs with Flexible Services spending.

Figure G.29 presents the distribution of 2019 flexible services spending per recipient for each category. In this plot, the boxes represent the interquartile ranges, the dots are outliers (expenditures greater than the 75th percentile plus 1.5 times the interquartile range), and the vertical lines extend to the minimum and maximum excluding the outliers. Horizontal lines show the median spending per recipient in each category. (Eight expenditures that exceeded \$3,000 were excluded from this display: \$16,668 for other; \$9,276, \$5,131, and \$3,125 for housing; \$3,976 and \$3,150 for home; \$3,465 for training/education, and \$3,122 for case management.)

This distribution of flexible services spending per recipient varied by category. Housing had the highest spending per recipient with a median value of \$454, reaching a maximum (outlier value) of \$9,276. Transportation had the lowest median value (\$43), but food and social had the smallest range, never exceeding more than \$500 per recipient.

Figure G.29: Distribution of Flexible Services Spending Per Recipient (\$) by Category, 2019



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