

**Coordinated Care Organizations' Nutrition Benefits Guidebook Development for
Oregon Health Plan Members**

Chenxi Liu

Graduate Programs in Human Nutrition

Oregon Health & Science University

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Table of contents

Introduction	3
Problem Statement.....	3
Project Goals.....	3
Organization Overview.....	4
Background.....	6
Barriers of Accessing Healthy Meals	6
The New 2022-2027 1115 Medicaid Waiver	10
Health-related Social Needs	11
Health-related Services (HRS)	13
Hospital Meal Reimbursement.....	14
Project Design and Methods	15
Literature Review	15
Interviews	15
Analysis	17
Summary of Written Deliverable.....	18
Conclusion	19
Potential implications for practice	19
Strengths.....	20
Limitations	20
Future directions.....	21
Evidence Table	22
References	35
Appendix A	38
Appendix B	39

Introduction

Problem Statement

In Oregon, people need to meet household income and residency requirements to be eligible for the Oregon Health Plan (OHP).¹ OHP covers the costs of a variety of different healthcare services to reduce the economic burden of lower-income families, and on top of that Oregon started to implement a new 1115 waiver.¹ This new waiver allows OHP to pay and cover more services for more OHP members.² Coordinated Care Organizations (CCOs) is a community-based health plan that works to integrate and coordinate healthcare services for Medicaid members in Oregon. CCOs provide healthcare services and different benefits to OHP members.¹ With the new 1115 waiver, the population that receives benefits from CCOs has expanded.² Since the 1115 waiver just started implemented in 2023, many healthcare providers and patients are unaware of the available nutrition benefits. Therefore, this capstone project will focus on discovering the nutrition benefits provided by Coordinated Care Organizations (CCOs) related to the new 1115 waiver, flexible services, hospital meal provision or other nutrition/food benefits and providing comprehensive guidance on how to access those benefits.

Project Goals

The goal of this project is to help healthcare staff and OHP members utilize available nutrition benefits to promote positive health outcomes and improve quality of life. The final product will be a guidebook that explains the comprehensive nutrition

benefits provided by CCOs, with detailed steps on how healthcare staff and OHP members can access these benefits, including health-related services, health-related social needs (HRSN) services, and non-emergent medical transportation (NEMT). Populations that may benefit from this capstone project include OHP members and healthcare providers. Healthcare providers can use the guidebook to apply for various nutrition benefits on behalf of OHP members, while OHP members can gain a clearer understanding of the benefits available to them and apply independently. Overall, the final product of this capstone project aims to increase awareness and access to nutrition benefits, making the application process more convenient for both healthcare providers and OHP members.

Organization Overview

Oregon Health & Science University (OHSU) is Oregon's only academic health center, combining patient care, education, and research.³ It trains healthcare professionals, conducts extensive research—including clinical trials—and provides advanced medical treatment.³ With multiple campuses, hospitals, clinics, and research facilities across the state, OHSU is also Portland's largest employer and a key contributor to Oregon's economy.³ Healthcare facilities affiliated with OHSU include OHSU Hospital, OHSU Doernbecher Children's Hospital, Hillsboro Medical Center (formerly Tuality Healthcare), Adventist Health Portland, and clinics located throughout Oregon.³

OHSU Hospital is a 576-bed teaching hospital in Portland, Oregon. It is a multi-specialty academic medical center that also includes Doernbecher Children's Hospital.

OHSU Hospital and Doernbecher Children's Hospital had 28,346 hospital visits and 55,226 emergency room visits in 2023.³ Based on the recent data in 2023, 86.81% of the OHSU patients were from Oregon, and more than half of the visits were patients without insurance or covered by a public payer.³

OHSU Hospital and Doernbecher Children's Hospital are located on Marquam Hill off S.W. Campus Drive.³ OHSU Hospital provides healthcare for adults, while Doernbecher Children's Hospital offers pediatric care for newborns through young adults.³ The cost of hospital-based food, fresh produce, and medically tailored meals can create a financial burden for many OHSU Hospital patients and their families, especially those with low incomes. Both hospitals are located up on the hill with no nearby grocery stores, so caregivers often rely on hospital meals, which can be expensive. Additionally, patients facing food insecurity may struggle to access nutritious foods that support recovery after discharge.

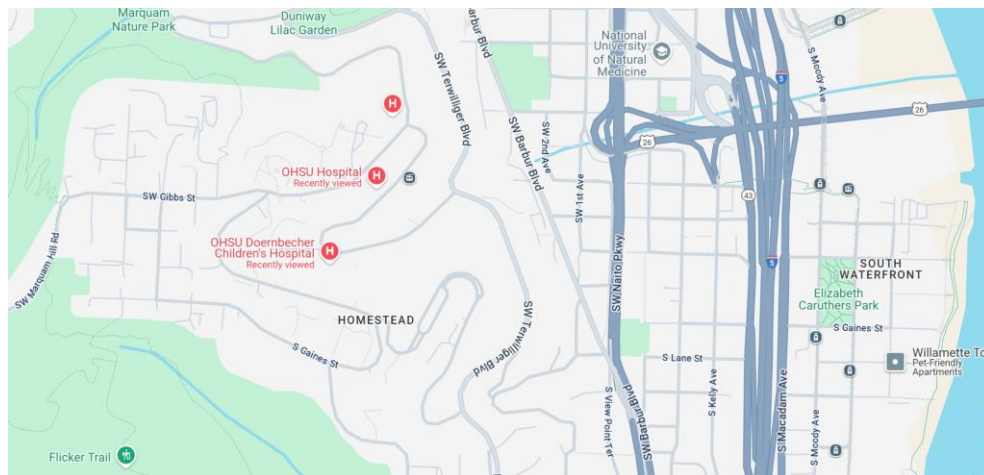


Figure 1: Location of OHSU Hospital and OHSU Doernbecher Children's Hospital

OHSU is committed to improving the health and well-being of people in Oregon. The OHSU Nourish team, based at Doernbecher Children's Hospital, is dedicated to addressing food insecurity through various methods to a wide range of patients and

caregivers, thereby promoting better health outcomes. The nutrition benefits guidebook developed through this project will be utilized by the Nourish team. It will serve as a resource for healthcare providers and patients to apply for nutrition benefits offered by CCOs. This will help enhance patient care and reduce financial burdens.

Background

Barriers of Accessing Healthy Meals

According to the United States Department of Agriculture (USDA) data on food prices and spending, food-at-home prices (foods purchased at grocery stores) increased by 5% in 2023 compared to 2022.⁴ One of the leading causes of this increase was the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) pandemic.⁴ Families with lower incomes spend an average of 32.6% (\$5,278) of their income on food annually, while higher-income families spend 8.1% (\$16,996) of their income on food.⁴ This demonstrates that lower-income families spend a significantly larger proportion of their income to food, despite having a smaller overall food budget.

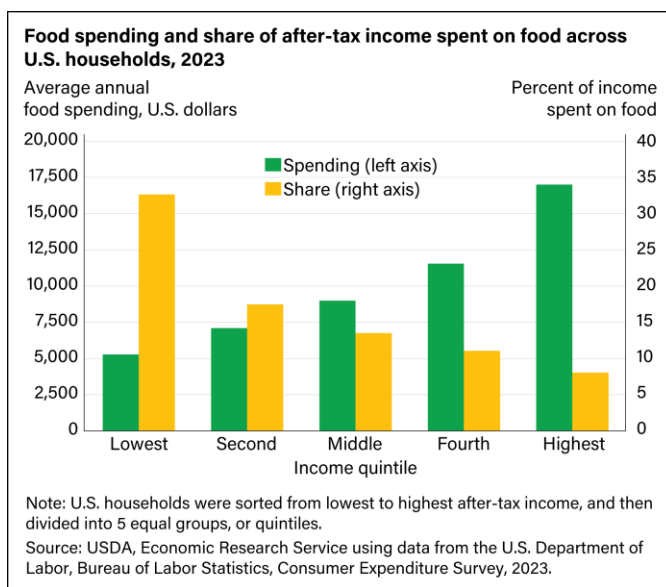


Figure 2: USDA data on households' income and food spending

In addition, USDA data on food availability and consumption shows people had increased consumption of meats, eggs, nuts, grains, vegetables, and fruits, but slightly fewer dairy products in 2018 compared to the food consumption in 1970.⁴ While the average 2018 consumption of meats, eggs, nuts, and grains exceeded the recommendations in the *2020–2025 Dietary Guidelines for Americans*, the intake of other major food groups, including vegetables, dairy products, and fruits, remained below the recommended amounts.⁴ Based on data from the U.S. Bureau of Labor Statistics, 6.3 million people were unemployed in the fourth quarter of 2023, compared to 5.9 million in 2022.⁵ United States household's food insecurity rates in 2023 (13.5%) were also statistically

significantly higher than in 2022 (12.8%).⁴ The combination of increased overall food prices (23.6% increase from 2020 to 2024) and increased unemployment rate made it more difficult for people to feed themselves, further contributing to the increase in food insecurity.⁴

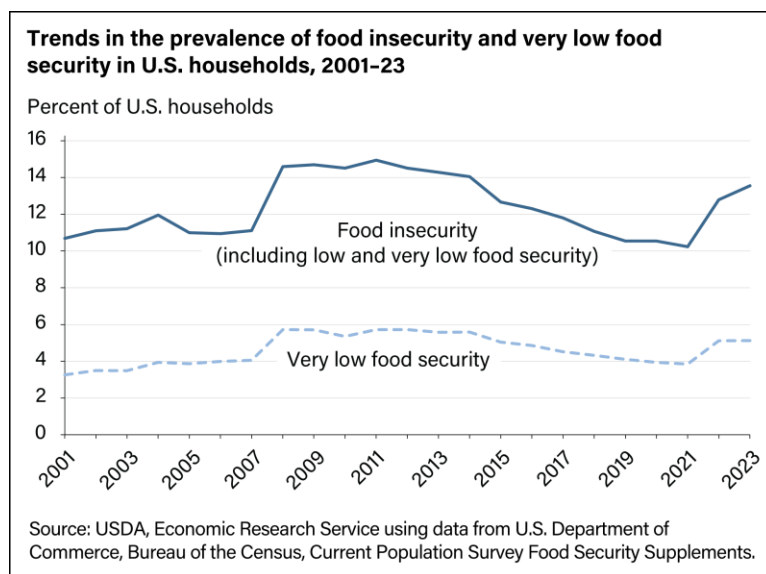


Figure 3: Prevalence of U.S. households food insecurity

Food insecurity is a complex issue with a variety of different causes, including but not limited to poverty, income inequality, residing in a food desert, unemployment, lack of access to transportation, etc. According to data reported by the Oregon Food Bank, the food insecurity rate in Oregon rose 14% in 2023 compared to the previous year.⁶

Approximately 1.9 million people in Oregon accessed food assistance programs through the Oregon Food Bank network.⁶ According to the recent study in 2023 and data collected by USDA, certain communities—including communities of color, immigrants and refugees, single mothers and caregivers, and LGBTQ (lesbian, gay, bisexual, transgender, and queer or questioning) individuals—are at greater risk of experiencing food insecurity.^{4,7,8}

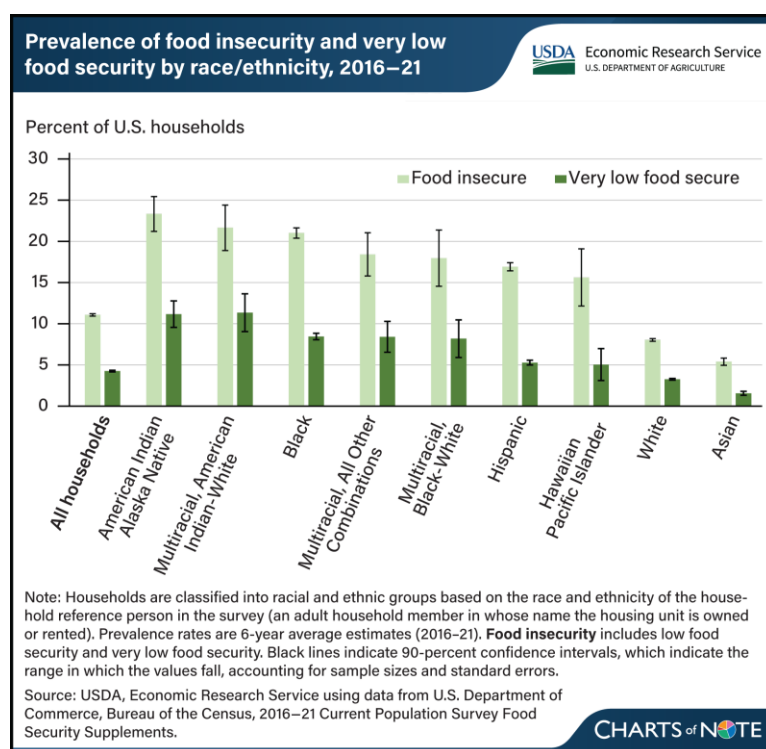


Figure 4: Prevalence of food insecurity by race in the U.S.

Food insecurity is directly associated with numerous negative health behaviors and outcomes. A study conducted among low-income adult women found that food insecurity was associated with unhealthy eating behaviors. Pregnant participants living in food-insecure households showed 21% more food addiction symptoms—such as eating disorders and uncontrolled eating—compared to those in food-secure households.⁹ Similarly, caregivers in food-insecure households reported 51% more food

addiction symptoms than those in food-secure homes.⁹ Another study published in 2022 found that caregiver of hospitalized children sometimes face challenges related to food insecurity.¹⁰ One caregiver reported eating leftover food from their child's plate, while another reported going almost two days without eating.¹⁰ Food insecurity is also associated with a higher risk of obesity, malnutrition, and chronic disease development, all of which can potentially increase the medical costs of food-insecure households.

In addition, a randomized controlled trial was conducted in 2023 to study food insecurity and experiences of discrimination among caregivers of hospitalized children.¹¹ Researchers enrolled 319 caregivers and measured household food security in the 30 days before admission, as well as the discrimination participants experienced during hospitalization.¹¹ Experiences of discrimination measured in the study included being treated with less courtesy than others, being treated with less respect than others, receiving poorer service, having a doctor or nurse act as if they think you are not smart, having a doctor or nurse act as if they are afraid of you, having a doctor or nurse act as if they are better than you, and feeling as though a doctor or nurse is not listening to what you are saying.¹¹

The results showed that 25.1% of participants positively screened for food insecurity, with 51.9% experiencing at least one type of discrimination during their child's hospitalization.¹¹ Among participants who experienced discrimination, caregivers with food insecurity were statistically significantly more likely to face discrimination compared to caregivers with food security.¹¹ The results suggest that food insecurity is associated with discrimination during hospitalization, which could negatively impact the self-esteem of both caregivers and children.

Due to the negative health outcomes associated with food insecurity, it is essential to increase access to food to promote better physical and mental health. Oregon's implementation of the new 1115 Medicaid Waiver may help address this need by providing additional nutrition benefits to individuals who may be experiencing food insecurity.

The New 2022-2027 1115 Medicaid Waiver

According to recent government data from 2023, approximately 1.5 million people are enrolled in the Oregon Health Plan (OHP), and the number of enrollees has increased by 2.2 times since 2012.¹² In Oregon, 33% of the population is enrolled in OHP, and 56% of children are covered by the plan.¹² Among OHP enrollees, 91.7% are part of a Coordinated Care Organization (CCO).¹² OHP covers medical costs and many health services for low-income adults, children, pregnant women, and people with disabilities.

Medicaid waivers allow states to experiment and implement new innovations using Medicaid funding.¹³ Oregon received approval in 1994 to implement these waivers, allowing the Oregon Health Plan (OHP) to become more flexible, broaden its services, and expand coverage for low-income residents.¹³ States are required to renew their Medicaid waivers every five years, and the current 1115 Medicaid Waiver for Oregon is in effect from October 1, 2022, to September 30, 2027.¹³ The goals of Oregon's 1115 waiver are to promote health equity by creating a more inclusive and responsive healthcare system, ensuring people can maintain their health coverage, improving health outcomes by addressing social factors that affect health, and using

smart and flexible spending to support health-related social needs (HRSN) and health equity.¹³

The 2022–2027 1115 Medicaid Waiver introduced changes that allow the Oregon Health Plan (OHP) to cover more services for more people. One of the key changes is the inclusion of health-related social needs (HRSN) services as an OHP-covered benefit. The purpose of HRSN is to provide social support to OHP members experiencing life transitions and to promote better health outcomes.¹³ The goal of HRSN services is to address and advance health equity.¹³ People eligible for HRSN services include participants in the child welfare system, individuals enrolled in both Medicaid and Medicare, those who are homeless or at risk of becoming homeless, and people who have been released from jail, a detention center, an Oregon Youth Authority facility, or the Oregon State Hospital within the past 12 months.¹⁴

Health-related Social Needs

HRSN services include housing, climate (dangerous heat index or cold weather), and nutrition.¹³ HRSN housing benefits provide support to OHP members who need assistance maintaining their current housing. These supports include temporary housing for up to six months, utility cost assistance, one-time transition and moving expenses, home modifications (e.g., ramps, handrails, environmental remediation), pre-tenancy and housing transition navigation services, and tenancy-sustaining services.¹⁵ HRSN climate benefits provide devices that help OHP members maintain healthy indoor air quality and temperature. These supports include medically necessary air conditioners, heaters, humidifiers, air filtration devices, and refrigerators.¹⁵ HRSN climate benefits

were active as of March 1, 2024 and housing benefits became active on November 1, 2024.¹⁵

HRSN nutritional benefits provide support to OHP members who meet the USDA definition of low food security. These supports include nutrition and cooking education, fruit and vegetable prescriptions for up to six months, medically tailored meal delivery for up to six months, and meals or pantry stocking for children under 21, youth with special health care needs (YSHCN), and pregnant individuals.¹⁵ CCOs began implementing nutrition benefits in January 2025. Currently, two nutrition benefits are available to OHP members: nutrition education and medically tailored meals. Additional nutrition benefits are scheduled to become available in the future.

To be eligible for HRSN nutrition services, OHP members must meet the general eligibility criteria mentioned in the previous section, screen as having low food security per the USDA 6-item screener, and meet the life situation and health condition requirements (see Appendix A).¹⁴ Additionally, OHP members who want to apply for medically tailored meals must have a consultation with a registered dietitian to develop a nutrition care plan.¹⁴ Medically tailored meals are available at the individual level only. They are not allowed for individuals who live in facilities that provide meals, and members must be able to safely receive, store, and heat meals.¹⁴ Members can receive up to three meals per day, seven days per week, for up to six months.¹⁴ Meal patterns must be developed and approved by a registered dietitian.¹⁴ In contrast, nutrition education can be offered to all waiver-covered populations not receiving medically tailored meals. The nutrition education OHP members receive must go beyond simply distributing handouts, flyers, booklets, or recipes.¹⁴

Currently, there are no resources that provide a comprehensive overview of the nutrition benefits provided by all CCOs in Oregon, nor instructions on how healthcare staff and OHP members can apply for health-related services. With the increased number of OHP members, and the focus on these transition populations who are hard to reach, healthcare staff and OHP members will need help to figure out available services and apply for the support they need. It is necessary to develop a nutrition benefits guidebook to fill this gap and to help OHP members maximize the use of these resources.

Health-related Services (HRS)

Health-related services (HRS) are non-covered services under Oregon's Medicaid State Plan and include flexible services and community benefit initiatives (CBI). HRS is designed to address social determinants of health and improve the overall community health and well-being.¹⁶ Flexible services are "cost-effective services offered to individual OHP members to supplement covered benefits."¹⁶ Community benefit initiatives are "community-level interventions that include members, but are not necessarily limited to only members, and are focused on improving population health and health care quality."¹⁶

To apply for flexible services, OHP members must be enrolled in a CCO.¹⁶ The items or services they are applying for must address a specific health need or circumstance that is not covered by standard OHP benefits.¹⁶ These items or services must also be able to improve the member's health outcomes or help them manage a chronic condition.¹⁶ Caregivers, OHP members, primary care providers, behavioral

health providers, care coordination staff members, and subcontractors within the CCO's network can all apply for flexible services for an OHP member by submitting an HRS-flexible services request.^{17,18} Flexible services cover services such as housing support, living environment, phone/video appointments, and food support (vouchers, cookware, meal delivery, farmers market in a food desert, etc.).¹⁷

Flexible services are not standard OHP benefits, so CCOs are not required to provide them, and the services offered can vary between CCOs. For example, Cascade Health Alliance has provided food supports such as bariatric nutritional meal enhancement products, specialty baby formula, and dialysis supplement drinks. In contrast, Advanced Health has offered grocery store gift cards or vouchers, nutrition and cooking classes, and blenders or nutritional drinks for OHP members recovering from medical procedures.^{19,20} Each CCO manages its own flexible services request process, and members may receive services for a duration of up to three months. While there are general criteria for flexible services, there are no specific guidelines that dictate which items or services must be denied. CCOs make decisions based on factors such as the member's health condition, life circumstances, available budget, and any supplemental materials submitted.¹⁶ For example, a member with autism or anxiety may be more likely to have a flexible services request approved if they request sleep aids.

Hospital Meal Reimbursement

The cost of hospital food can contribute to the financial burden on hospitalized OHP members and their families. Inpatient meals are considered part of inpatient hospital services, so the cost of meals for the patient is covered.²¹ However, there is

limited evidence that meals purchased by a patient's caregivers are covered by CCOs. Currently, there are two ways for caregivers to receive meal reimbursement: through flexible services or Non-Emergent Medical Transportation (NEMT). Caregivers can have hospital meals reimbursed through flexible services. NEMT is intended to help individuals travel between their homes and scheduled medical appointments.²² Each CCO has its own NEMT provider, and the current meal reimbursement rate is \$34 per day. OHP members must contact their NEMT provider to schedule transportation and confirm whether they are eligible for meal reimbursement.²² In addition, CCOs are not required to approve flexible services requests, so hospital meal reimbursements for caregivers and members are not guaranteed.

Project Design and Methods

Literature Review

Online research was conducted to gather information about OHP policies, the new 1115 Medicaid Waiver, HRSN services, health-related services, a list of CCOs across Oregon, CCO contact information, hospital meal reimbursement, and other relevant details regarding nutrition benefits provided to OHP members. The information collected will be used during the interview process and in the written deliverable.

Interviews

Interviews with employees of CCOs were conducted with support from mentors and committee members. The list of interviewees and the interview questions were

developed collaboratively with mentors and committee members (see Appendix B). Contact information for CCOs was gathered through mentors, CCO employees, and online resources. The primary goals of the interviews were to identify the nutrition benefits offered by CCOs, understand the eligibility criteria, learn how members can apply for those benefits, and gather input from CCO employees on what information would be most useful in the guidebook. Additionally, the interviews aimed to determine whether CCOs can cover the cost of hospital meals for caregivers and how members can access this benefit.

In most cases, it took input from multiple interviewees to fully answer the interview questions, and these individuals preferred to communicate through various methods, including email, Webex, Zoom, and Microsoft Teams. On average, it took one to two weeks to receive responses via email, primarily because CCO staff were busy implementing HRSN services. When there was no designated contact person or no response from certain CCOs, follow-up phone calls were made to obtain the necessary information. Additionally, relevant information was gathered by attending conferences hosted by the Oregon Health Authority and CCOs.

After the information was collected, it was analyzed and organized into a guidebook. The nutrition benefits guidebook was made available in digital format. Feedback was gathered from mentors and committee members, and necessary edits were made prior to submission. This project did not involve any private health information.

Analysis

The eligibility criteria, application process, and processing times for applying to HRS, HRSN, and NEMT services were gathered. CCOs and their contact information were listed in Excel. When CCOs responded to emails or interview requests, their names were highlighted to track project progress. The content of the interviews was typed in Microsoft Word and stored in each CCO's folder. Each CCO had its own folder to store interview notes and information regarding HRS, NEMT, and HRSN. This information was finalized into one comprehensive guidebook, which served as the written deliverable. The structure and content of the guidebook were based on the project proposal, which required inclusion of the application process, eligibility criteria, and processing times for HRS and HRSN services, as well as ways for caregiver to get hospital meal reimbursement.

Eligibility for HRSN was consistent across all CCOs in Oregon, as they follow the Oregon Health Authority guidelines. Some CCOs, such as Cascade Health Alliance and CareOregon, have streamlined their application processes for flexible services and HRSN by combining them into a single application form, rather than requiring two separate forms. Applicants now need to complete only one form when applying for both flexible services and HRSN. After submission, CCOs first assess whether the applicant is eligible for HRSN services. If the applicant does not meet the criteria, the CCOs then evaluate eligibility for flexible services.

Flex funds are considered a supplement to covered benefits and should be used as a last option for OHP members. When applicants apply for flexible services, CCOs

typically ask whether they have explored other resources, such as local food pantries, or if they have contacted a care coordinator for local nutrition support. Unfortunately, there are no specific guidelines for determining which flexible service requests will be approved; all decisions are made on a case-by-case basis. Although members can submit applications themselves, most flexible service requests are initiated by providers and care coordinators.

It is rare for OHP members to apply for HRSN nutrition benefits; most applications are for HRSN housing and climate-related benefits. Additionally, there are no known pathways to reimburse meals for caregivers outside of flexible services and NEMT. Through NEMT, members can receive meal reimbursements for themselves and one accompanying person while traveling to medical appointments. In some cases, members may also qualify for meal reimbursement when traveling in a friend's vehicle. To receive reimbursement through flexible services, members are required to keep and submit their receipts. In contrast, meal reimbursements through NEMT do not require receipts.

Summary of Written Deliverable

The Coordinated Care Organizations' Nutrition Benefits Guidebook is presented in a digital format and provides detailed information about the nutrition benefits offered by CCOs across Oregon. The guidebook includes lists of food resources provided by some CCOs, along with detailed descriptions. It also offers instructions on how to apply for various nutrition benefits, outlines eligibility criteria, estimated processing times, and includes any relevant forms required for application.

The guidebook begins with explanations of HRS, HRSN, hospital meal reimbursement, and NEMT to help readers understand the foundational concepts. Each CCO has its own section that outlines the application processes for flexible services, HRSN, and NEMT. Only certain CCOs include a list of local food resources under the Community Benefits Initiatives (CBI) section, as many CCOs prefer members to call and speak directly with a care coordinator to discuss personalized nutrition support options for those experiencing food insecurity.

Each section includes information on eligibility for HRS, HRSN, and NEMT. While HRSN eligibility is consistent across all CCOs and may appear repetitive, including it in each section serves a practical purpose. Placing eligibility information only at the beginning of the guidebook would require healthcare providers to scroll back and forth to locate the details they need. By putting eligibility within each section, the guidebook allows healthcare providers to easily copy and share complete, self-contained sections—such as the flexible services request process—with patients or colleagues, without needing to reference multiple parts of the document.

Conclusion

Potential implications for practice

The guidebook enhances accessibility of nutrition support by providing healthcare providers and OHP members with clear guidance on how to assist members in applying for nutrition-related support. This guidebook also improves efficiency, because healthcare providers can save time on finding forms to fill out and how to

submit these forms. By making the application steps transparent and easy to follow, the guidebook empowers healthcare providers to share accurate information with OHP members, which may lead to increased utilization of nutrition services like HRSN nutrition benefits.

Strengths

A key strength is the practical approach used to gather and organize information about nutrition benefits across Oregon's CCOs. By combining employee interviews with online research, the project captures both official policy details and real-world implementation insights. Many CCO employees were kind and supportive, generously offering their time despite being in the midst of implementing HRSN benefits. They provided a lot of current, valuable information. The inclusion of specific application processes and eligibility criteria makes the guidebook a user-friendly and practical resource for healthcare providers and OHP members. Additionally, presenting the guidebook in a digital format allows for easy sharing, copying, and future updates, which enhances its usability.

Limitations

This project has several limitations. First, the information gathered is limited to what was shared by interviewed CCO employees and available online resources at the time of research, so some CCOs may have made changes to their application processes or nutrition benefits that were not captured. Second, not all CCOs responded to interview requests, so some information was obtained by calling customer service,

which may not reflect the most up-to-date details. Third, application processing times can vary depending on the number of applicants, so the estimates provided may not always be accurate.

Future directions

Since there are currently only two HRSN nutrition benefits available and CCOs plan to implement additional nutrition benefits in the future, this guidebook will need to be updated once the new benefits go live. Additionally, some CCOs are working to simplify the application process for flexible services and HRSN by combining two separate forms into a single, comprehensive form. Therefore, the application process sections for flexible services and HRSN will also need to be updated in the future.

Evidence Table

Citation	Year	1st author last name	Population	Methods	Results	Fields specific to project
1) Eligibility: Oregon Health Plan: State of Oregon. Accessed May 14, 2024. https://www.oregon.gov/oha/hsd/ohp/pages/eligibility.aspx .	2024	Oregon Health Authority	Public	Website	Provided an overview of the qualifications of OHP benefits.	OHP benefits and eligibility information.
2) 2022-2027 1115 Medicaid Waiver Overview and Implementation Update. lecture presented at: May 14, 2024. https://www.washingtoncountyor.gov/housing/homeless-services-division/documents/oha-waiver-presentation-6723pdf/download?inline	2023	Oregon Health Authority	Healthcare providers and people whose work intersects with the 1115 Waiver.	Lecture	Provided an overview of HRSN benefits, and timeline of implementing 2022-2027 1115 Medicaid Waiver.	The goal of the waiver is to promote health equity and improve overall health outcomes. The plan is to provide all HRSN services in 2025. HRSN services for transition populations include housing support, nutrition support (counseling and education, medically tailored

						meals, pantry foods, fresh produce, etc.), and climate change.
3) About OHSU. OHSU. Accessed July 28, 2024. https://www.ohsu.edu/about/ohsu-facts .	2024	OHSU	Public	Website	Provided facts of OHSU, including education, research, financials, etc.	Information regarding hospital beds, hospital visits, and patient population helps with organizational overview.
4) AG and food statistics: Charting the essentials. USDA ERS - Ag and Food Statistics: Charting the Essentials. Accessed August 30, 2024. https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ .	2024	USDA	Public	Graphs	Provided an overview of U.S. food Statistics.	Information regarding U.S. food insecurity rates, household income, food prices, and spending was helpful for the background section of the final report.
5) Unemployment rate inches up during 2023, labor force participation rises. U.S.	2023	U.S. Bureau of Labor	Public	Article	Provided an overview of U.S. unemployment rates in 2023	Unemployment rates were used to compare food prices and spending.

Bureau of Labor Statistics. May 2024. Accessed August 17, 2024. https://www.bls.gov/opub/mlr/2024/article/unemployment-rate-inches-up-during-2023-labor-force-participation-rises.htm#:~:text=Although%20there%20was%20an%20uptick,quarter%2C%20increased%20over%20the%20year.						
6) Oregon hunger facts. Oregon Food Bank. May 23, 2024. Accessed August 17, 2024. https://www.oregonfoodbank.org/posts/oregon-hunger-facts .	2024	Oregon Food Bank	Public	Article	Provided an overview of food insecurity issues in Oregon.	Data of population accessed Oregon food pantries helped understand local food insecurity rates.
7) Sharareh N, Bybee S, Goldstein E, et al. Disparities in food insecurity between	2023	Sharareh	Sexual minority adult (≥18 years old), including gay/lesbian,	Observational study	Non-Hispanic white and non-Hispanic black individuals	Some specific communities including communities of color, immigrants

sexual minority and heterosexual adults - a higher burden on bisexual individuals. Front Public Health. 2023;11:1237091. Published 2023 Aug 7. doi:10.3389/fpubh.2023.1237091			bisexual, and other non-heterosexual individuals.		identifying as bisexual also experienced a significantly higher FI rate than their heterosexual counterparts.	and refugees, single moms and caregivers, and LGBTQ (lesbian, gay, bisexual, transgender and queer or questioning) are at a greater risk of food insecurity.
8) Food insecurity in U.S. households varies across race and ethnicity. USDA ERS - Chart Detail. Accessed September 8, 2024. https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=108925#:~:text=Households%20headed%20by%20a%20reference,percent)%3B%20and%20Ha	2024	USDA	Public	Graph	Graph shows percent of U.S. households with food insecure and very low food secure. American Indian, Black, Multiracial, and Hispanic have higher food insecure rates.	White and Asian populations have the lowest food insecurity rates, while American Indian and Black populations have the highest.

waiian%20and .						
9) Parnarouskis L, Gearhardt AN, Mason AE, et al. Association of Food Insecurity and Food Addiction Symptoms: A Secondary Analysis of Two Samples of Low-Income Female Adults. J Acad Nutr Diet. 2022;122(10):1885-1892. doi:10.1016/j.jand.2022.04.015	2022	Parnarouskis	Participants in study 1: English-speaking, low-income pregnant individuals with overweight or obesity. Participants in study 2: English-speaking, low-income female caregivers for children aged 8 through 10 years	Observational study	Pregnant women in food-insecure households reported 21% higher food addiction symptoms than pregnant women in food-secure households. Caregivers in food-insecure households had 56% higher food addiction symptoms than caregivers in food-secure households	Food insecurity is strongly associated with food addiction symptoms, and further leads to unhealthy relationships with food. Binge eating will also lead to negative health outcomes and can potentially increase medical costs.
10) Vaz LE, Jungbauer RM, Jenisch C, et al. Caregiver Experiences in Pediatric Hospitalizations: Challenges and Opportunities for	2022	Vaz	14 caregivers at a Pacific Northwest children's hospital	Observational Study	Emergent domains on difficulties faced with their child's hospitalization were anchored on physiologic (sleep,	In-hospital food insecurity: caregivers having difficulty accessing meals.

Improvement. Hosp Pediatr. 2022;12(12):1073-1080. doi:10.1542/hpeds.2022-006645					personal hygiene, and food), psychosocial (feelings of isolation, mental stress), and communication challenges (information flow between families and the medical teams).	
11) Cacioppo AM, Winslow V, Abramsohn EM, et al. Food Insecurity and Experiences of Discrimination Among Caregivers of Hospitalized Children. Pediatrics. 2023;152(6):e2023061750. doi:10.1542/peds.2023-061750	2023	Cacioppo	319 caregivers of children admitted to an urban, academic children's hospital	Randomized control trial. Household food security in the 30 days before admission and discrimination during hospitalization were measured with the US Household Food Security Survey and the Discrimin	Food insecurity (25.1%) and marginal food security (15.1%) were prevalent. 51.9% participants experienced discrimination, and caregivers with food insecurity were more likely to experience discrimination (had higher odds of 5	Food insecurity is linked to a higher likelihood of experiencing discrimination during a child's hospitalization. The results of the study suggest that food insecurity is associated with bad hospitalization experiences. It is important to increase patient and caregiver

				ation in Medical Settings Scale.	of 7 experiences of discrimination assessed).	access to foods to promote better hospitalization experiences.
12) Medicaid enrollment report. Oregon Health Authority: Medicaid Enrollment Report: Office of Health Analytics: State of Oregon. Accessed August 17, 2024. https://www.oregon.gov/oha/hpa/analytics/pages/medicaid-enrollment.aspx#Dashboard .	2024	Oregon Health Authority	Public	Data of Medicaid Enrollment.	The data shows the number of people enrolled in Medicaid in Oregon in 2024.	This data was helpful in indicating that this nutrition benefits guidebook was necessary due to the high number of people enrolled in Medicaid.
13) Wilson J, Cary M. 1115 Medicaid Waiver: Opportunities for Addressing Social Determinants of Health In Rural Oregon. lecture presented at: July 20, 2024. Accessed 2024.	2024	Wilson	Healthcare providers	Lecture	Provided information regarding the 1115 Medicaid Waiver and how it can be used to address social determinants of health.	Introduction on 1115 Waiver, goals of 1115 Waiver, and timeline of implementing 1115 Waiver.

https://www.ohsu.edu/sites/default/files/2024-06/1115%20Medicaid%20Waiver%20Health-Related%20Social%20Needs.pdf .						
14) OHP 1115 Medicaid Waiver for 2022-2027. Oregon.gov. June 21, 2023. Accessed July 29, 2024. https://www.oregon.gov/oha/hsd/medicaid-policy/pages/waiver-renewal.aspx .	2023	Oregon Health Authority	Public	Website	Provided information on the changes in the 2022-2027 Waiver.	The 1115 Waiver improve the lives of individuals who face historic and contemporary injustices, increases individual, family and community resilience, and reduce health disparities for groups most affected by injustice and discrimination.
15) OHP 1115 Medicaid waiver for 2022-2027. Oregon Health Authority. December 12,	2023	Oregon Health Authority	Public, OHP members, healthcare providers	OHP 1115 Medicaid Waiver Manual	Provided detailed information on Oregon Health Plan, Medicaid,	Nutritional benefits that will be covered by the HRSN include nutrition

2023. Accessed July 20, 2024. https://www.oregon.gov/oha/HSD/Medicaid-Policy/Documents/2022-2027-Waiver-FAQ.pdf .					OHP 1115 Waiver, and HRSN services.	and cooking education, fruit and vegetable prescriptions for up to 6 months, medically tailored meal delivery for up to 6 months, meal or pantry stocking for children under 21, YSHCN, and pregnant individuals. "Needfood. Oregon.gov" is a great website to find the available food resources.
16) Health-related services brief. Oregon Government . November 2022. Accessed August 31, 2024. https://www.oregon.gov/oha/HPA/dsi-tc/Documents/OHA-Health-Related-	2022	Oregon Health Authority	Public, OHP members, healthcare providers	Health-Related Services Manual	Provided summary about health-related services (HRS). The goals of HRS are to promote the efficient use of resources and address	Flexible services are more relevant in this project compared to community benefit initiatives because flexible services offer benefits to individual

Services-Brief.pdf.					members' social determinants of health to improve health outcomes. HRS include flexible services and community benefit initiatives. Flexible services are cost-effective services offered to an individual member to supplement covered benefits, while community benefit initiatives focus on community level interventions.	OHP members instead of the community. CCOs are not required to provide flexible services and flexible services provided by each CCO are different.
17) Flex requests - health related services - careoregon. CareOregon. Accessed August 31, 2024. https://www.ca	2024	CareOregon	Public	Website	Provided application process and eligibility of applying for HRSN and HRSF.	The eligibility to apply for HRSN and HRSF include: patients must be a current member;

reoregon.org/providers/health-related-services/flex-requests.						patients are not able to get the item/service through any other benefit or means; the item or service must help with their medical need or life situation, and they provide all required documentation for the request.
18) Flexible services funding request instructions. CareOregon. Accessed September 1, 2024. https://www.careoregon.org/docs/default-source/providers/forms-and-policies/hrs/ohp-hrsf-flexible-services-funding-request-instructions.pdf?sfvrsn=4803a770_5 .	2024	CareOregon	OHP members and healthcare providers	Handouts of "Flexible Services Funding Request Instructions"	Contains information about Health-related services policy.	Examples of who can request health-related services for members.

19) Provider health-related services cascade health alliance. Cascade Health Alliance. Accessed August 31, 2024. https://www.cascadehealthalliance.com/for-providers/health-related-services/ .	2024	Cascade Health Alliance	OHP members and healthcare providers	Website	Provided information regarding flexible services.	Examples of flexible services requested items including food supports, transportation, living environment, etc.
20) Flexible funding “Flex Fund” services request. Advanced Health. Accessed August 31, 2024. https://advancedhealth.com/wp-content/uploads/2022/12/Flex-Fund-11.22.22-FINAL.pdf .	2022	Advanced Health	OHP members and healthcare providers	Handout on flexible services request.	Provided information regarding flexible services including eligibility, who can submit the request, timeline, etc.	Examples of items that have been covered include educational books for diagnosis condition, diabetes education class, and classes for weight loss, nutrition, cooking or exercise.
21) Mandatory & optional Medicaid benefits. Medicaid. Accessed August 31, 2024. https://www.m	2024	Medicaid	Public	Website	Provided information on mandatory and optional Medicaid benefits.	Inpatient meals are considered part of inpatient hospital services, so the cost of meals for

edicaid.gov/medicaid/benefits/mandatory-optional-medicaid-benefits/index.html.						the patient is sometimes covered.
22) Oregon health plan (OHP) and travel help. Oregon Health Authority : Oregon Health Plan (OHP) and Travel Help : Oregon Health Plan : State of Oregon. Accessed April 16, 2025. https://www.oregon.gov/oha/hsd/ohp/pages/nemt.aspx .	2025	Oregon Health Authority	Public	Website	Provided information about NEMT.	NEMT is intended to help individuals travel between their homes and scheduled medical appointments. Each CCO has its own NEMT provider and meal reimbursement rates. OHP members must contact their NEMT provider to schedule transportation and confirm whether they are eligible for meal reimbursement.

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Appendix A

HRSN Qualifying Life Situations

- Left incarceration (jail, detention, etc.) in the past 12 months
- Left a mental health or substance use disorder treatment facility in the past 12 months
- In the Oregon child welfare system (foster care) now or in the past
- Going from Medicaid-only benefits to qualifying for Medicaid plus Medicare
- Experiencing homelessness
- Have a household income that's 30% or less of the average yearly income where they live AND lack resources or support to prevent homelessness
- Being a young adult aged 19-20 who is living with an on-going childhood health condition

HRSN Qualifying Health Conditions

- Complex physical health condition
- Complex behavioral health condition
- Developmental or intellectual disability
- Difficulty with self-care and daily activities
- Experience of abuse or neglect
- 65 or older
- Under age 6
- Pregnant or gave birth in the past 12 months
- Repeated trips to emergency room or crisis services

Appendix B

Interview questions:

1. Please describe the nutrition benefits provided by your CCO.
 - a. Follow-up probes:
 - i. How are these benefits funded – OHP benefits , HRS/flexible services, Community Benefit Initiative, another approach?
 - ii. What are the eligibility criteria for receiving these benefits?
 - iii. What were the factors that informed the decision to offer these particular benefits to your clients?
 - iv. [If they do offer something] What is the duration and amount of the support (e.g. how long could someone get medically-tailored meals? What amount is a grocery card for?)?
 - v. [If they say “none” or don’t seem to understand what you mean by “nutrition benefit”] We have heard of some CCOs paying for medically-tailored meals, grocery cards, or produce prescriptions. Do any of those apply?
 - vi. Do you use a community information exchange platform to process referrals?
 - vii. Processing time of applying to health related services
2. Please describe the application process for these benefits.
 - a. *Follow-up probes:*
 - i. Who may apply for benefits?
 - ii. How do people apply for these benefits?

- iii. What feedback, if any, have you received regarding the application process?
- 3. What plans, if any, does your CCO have to provide HRSN (health-related social needs) nutrition-related support?
 - a. What is the timeline for the rollout of these supports?
 - b. What nutrition-related support will be provided?
 - c. What is the eligibility criteria?
- 4. Please describe the application process for these HRSN benefits.
- 5. When parents or caregivers have to purchase meals during their stay with their hospitalized child, what options currently exist, if any, for your CCO to reimburse parents for these meals?
 - a. *Follow-up probes*
 - i. What are the conditions or eligibility criteria for receiving reimbursement from the CCO for a parent/caregiver meal during a child's hospitalization?
 - ii. What is the process of applying for a parent/caregiver meal reimbursement?
 - iii. What feedback have you received, if any, regarding this process?
 - iv. What are the reimbursement rates? Per diem? (per day)