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HealthConnect Long-term Impact of the HealthConnect Hub by County

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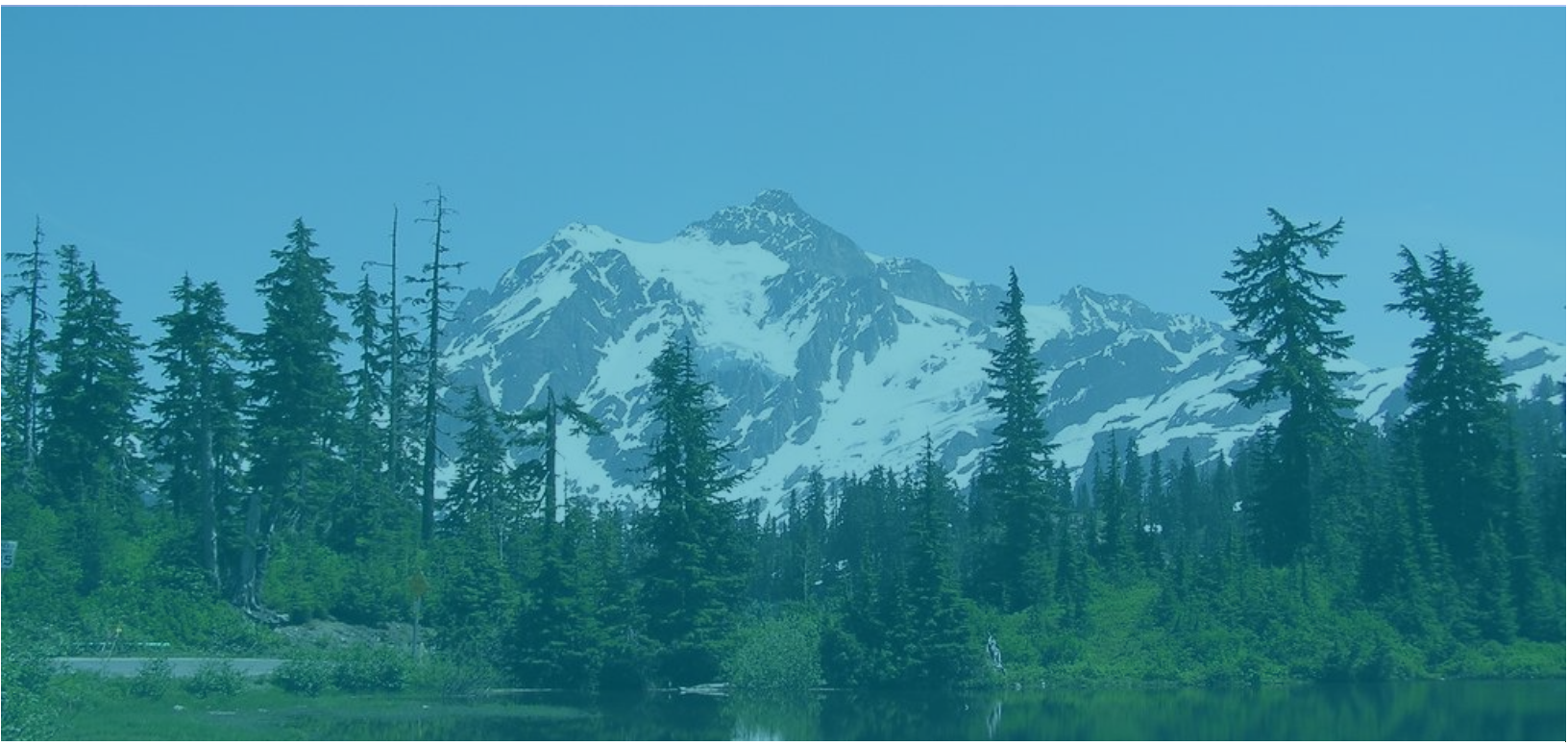
SWACH EVALUATION REPORT

Long-term Impact of the HealthConnect Hub by County

December 2022



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Background

Serving Clark, Klickitat, and Skamania counties, the Southwest Washington Accountable Community of Health (SWACH) created the HealthConnect Hub in 2019 to serve as a central care coordination system aimed at advancing whole person health by systematically:

- Identifying program participant needs
- Coordinating referrals across physical health, behavioral health, and social services partners
- Providing support in navigating currently fragmented systems

The counties in the SWACH region differ substantially in terms of population size, rurality and availability of health care and social service resources, as well as organizational engagement in the HealthConnect Hub.

The HealthConnect Hub Model

Several programs operate through the HealthConnect Hub, including the evidence-based care coordination program Pathways, and other whole-person care programs which largely rely on the community-based workforce (CBW) and the data infrastructure provided by the HealthConnect Hub.

SWACH partnered with the Center for Outcomes Research and Education (CORE) to evaluate a variety of their efforts and initiatives, including understanding the impact of the HealthConnect Hub on program participants. **This report details the findings of an analysis of Medicaid claims data to understand the long-term impact of the HealthConnect Hub on health care utilization in the different counties served by SWACH.**

Key Takeaways

HealthConnect Hub participant characteristics differ by county in terms of demographics and program engagement

While HealthConnect Hub participants overall are similar demographically to the general Medicaid population in the SWACH service area, we saw differences by region by race and primary language. Program engagement also differed by region. Overall, client identified needs were similar across the region.

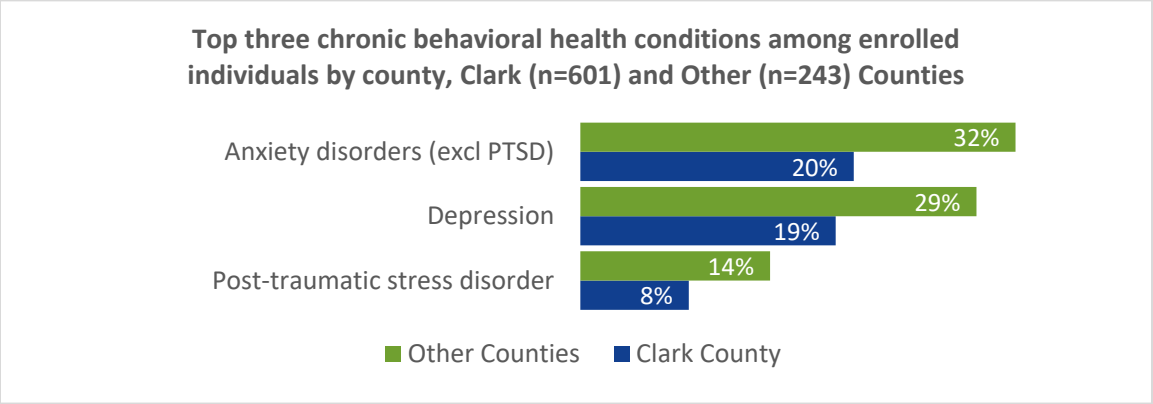
- **Only 87% of participants in Clark County speak English as their primary language** compared to 97% of participants in Klickitat and Skamania Counties.
- **Housing, transportation, and food were the top identified needs** in Clark and Klickitat & Skamania Counties.

Clark County	Average number of days spent in CCS data	Klickitat & Skamania Counties
127		213

Health Burden Differences by County

The burden of chronic conditions varied substantially by region. Participants in Klickitat & Skamania Counties had higher rates of behavioral health conditions and dual (both physical and behavioral health) diagnosis. Much of the differences in behavioral health chronic condition diagnoses is driven by participants in Skamania County where on of the primary referral agencies is a mental health care provider.

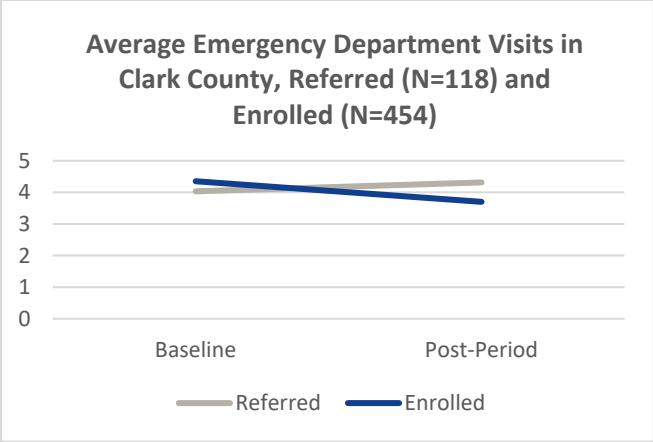
- **More than one-third** of participants in Klickitat & Skamania Counties had **both a chronic physical and behavioral condition diagnosis.**
- **20% of participants in Clark County had a chronic physical health** compared to 12% of participants in Klickitat and Skamania Counties.

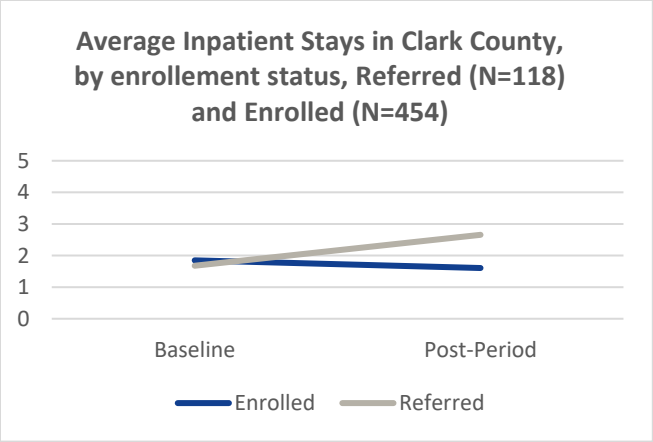


Engagement in the HealthConnect Hub had positive impacts on long-term health care utilization in Clark County

Engagement in the HealthConnect Hub in Clark County was significantly associated with improved connection to specialty care as well as positive patterns in acute care use. We did not see any significant changes in long-term utilization among participants in Klickitat & Skamania Counties.

- For acute care use, we see fewer enrolled individuals in Clark County using care in the post-period relative to the referred group. We also see fewer average acute care visits among enrolled individuals compared to the baseline year.





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Background

Serving Clark, Klickitat, and Skamania counties, the Southwest Washington Accountable Community of Health (SWACH) created the HealthConnect Hub in 2019 to serve as a central care coordination system aimed at advancing whole person health by systematically:

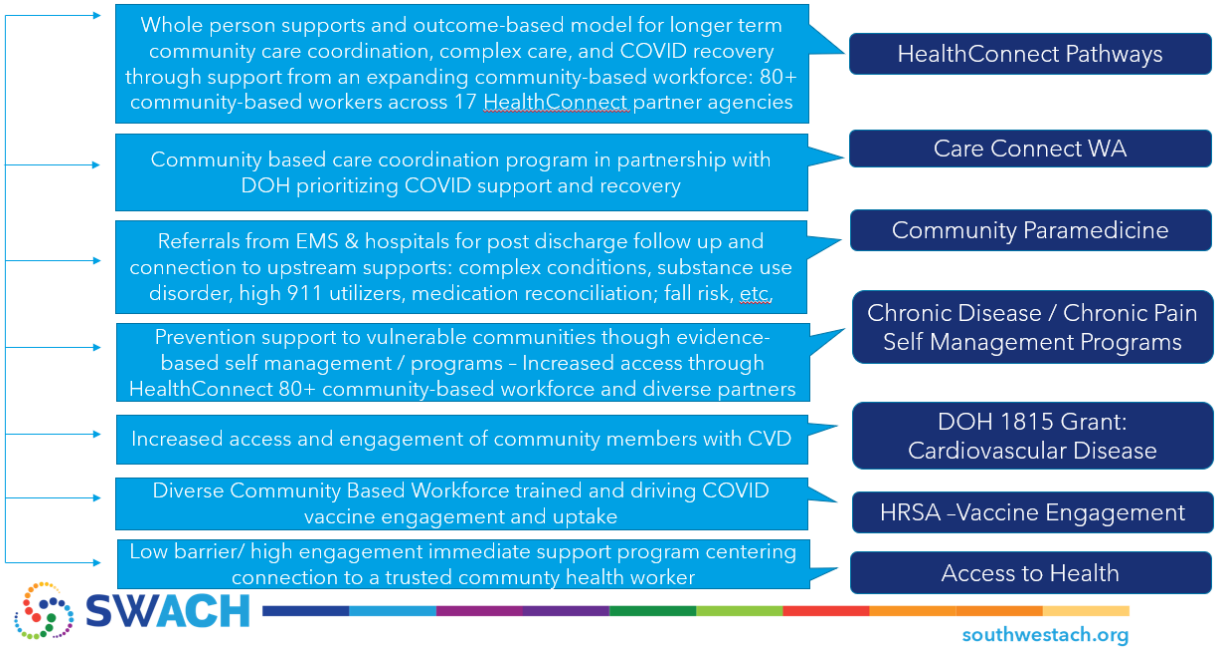
- Identifying program participant needs
- Coordinating referrals across physical health, behavioral health, and social services partners
- Providing support in navigating currently fragmented systems

HealthConnect Hub Programs

Several programs operate through the HealthConnect Hub. The first program to be implemented, the Pathways program, is an evidence-based approach to care coordination in which partnering HealthConnect Integrated Partners hire and train community-based health workers (CBWs) to support program participants in navigating different health care and social services systems to receive needed care.

Since the implementation of Pathways, several other programs have been brought into the HealthConnect Hub (**Figure 1**). The model includes multiple programs designed to address whole person care coordination and chronic disease self-management, as well as more narrowly focused efforts such as a program aimed at equitably expanding COVID-19 vaccine rollout. In general, these programs rely on the HealthConnect Hub infrastructure, especially the community-based workforce (CBW) and the community health record data system.

Figure 1. The HealthConnect Hub Model



Purpose of this Report

SWACH has partnered with the Center for Outcomes Research and Education (CORE) to evaluate a variety of their efforts and initiatives, including better understanding the impact of the HealthConnect Hub on program participants. **This report details the findings of an analysis of Medicaid claims data to understand the long-term impact of the HealthConnect Hub on health care utilization in the different counties served by SWACH.**

Methods

Evaluation Questions

The counties in the SWACH service area differ substantially in terms of population size, rurality, and availability of health care and social service resources, as well as organizational engagement in the HealthConnect Hub. In previous evaluation activities, participants and staff have highlighted rural and urban differences in the region as a factor shaping engagement in the HealthConnect Hub.[1] To help document and understand these differences, we examined changes in long-term health care utilization by the different regions. Our main evaluation questions for this report are:

1) **How does participation in the HealhtConnect Hub compare between the two regions (Clark County vs. Klickitat/Skamania counties) in terms of participant demographics, length of program engagement, chronic health burden, and baseline health care utilization?**
2) **How did engagement with the HealthConnect Hub impact health care utilization in the twelve months after enrollment in Clark County?**
3) **How did engagement with the HealthConnect Hub impact health care utilization in the twelve months after enrollment in Klickitat and Skamania counties?**

Study Sample

Our evaluation focuses on adults (18 years of age or older) who were both enrolled in Medicaid and referred to or enrolled in any HealthConnect Hub program with data recorded in Care Coordination Systems (CCS) from February 2019 through August 2021. Some analyses required a specific length of Medicaid enrollment either before or after referral to or engagement in the HealthConnect Hub; specific Medicaid enrollment criteria and sample sizes are given in each section.

We defined our intervention group as individuals with a status of enrolled at any point during the study window. We defined a control group specific to each county as individuals with a status of referred in the respective county. Individuals with other statuses (e.g., Declined, Ineligible) were excluded from the analysis. Due to the small number of referred individuals who matched to Medicaid data in Klickitat or Skamania counties and the similarities shared by these counties, data from individuals in these regions were combined into one group.

Data Sources & Measures

Two sources of data were used to compile this report: CCS data and Medicaid data. Information on all HealthConnect Hub participants is tracked and recorded through CCS; this includes demographics, health and social/economic needs, and work done with the CBW. This information is, however, less available for individuals who were referred to the HealthConnect Hub but never engaged in its programs.

Medicaid enrollment and claims data contain information on demographics, chronic conditions, and all health care utilization for Medicaid enrollees. Because Medicaid data has more complete information than CCS on demographics and chronic conditions for the control group, we use the Medicaid data whenever possible in this report.

[1] Two previous reports produced by CORE in 2021 highlighted regional differences in HealthConnect participation: "Understanding the Experiences of Pathways Participants in SW Washington" and "Understanding the Experiences of the Pathways Workforce in SW Washington".

Populations Served by the HealthConnect Hub

Demographics

This section describes the demographic characteristics of individuals enrolled in the HealthConnect Hub, referred to here as participants, by region (**Table 1**). To be considered in the analysis, participants needed to be enrolled in Medicaid data for at least one day.

There were few differences in the age and gender composition of participants in Clark and Skamania/Klickitat counties. About one third of the sample was aged 18 to 30 years old and the majority identified as female. Nearly all participants in both regions were younger than 65. Although restricting the analysis to individuals who matched to Medicaid data does artificially decrease the number of individuals over 65 in the sample, in general the age of HealthConnect Hub participant is younger than 65. Even among those who did not match to Medicaid data, about 90% were under 65.

Participants in Clark County were more likely to identify as a race other than White compared to participants in Klickitat and Skamania counties. However, a higher percentage of participants in Klickitat and Skamania counties identified as American Indian/Alaska Native. Similarly, participants in Clark County were more likely to report speaking a language other than English as their primary language. With respect to ethnicity, participants from all areas largely identified as Not Hispanic/Latinx.

Table 1: Demographics of HealthConnect Hub participants, by region

	Clark County N=601	Klickitat & Skamania Counties N=243
Age at entry		
18 - 30	34%	36%
31 - 40	21%	21%
41 - 50	16%	14%
51 - 64	22%	24%
65 and over	6%	5%
Gender		
Female	58%	64%
Male	42%	36%
Race		
American Indian/Alaskan Native	3%	7%
Asian	2%	<5%*
Black	8%	<5%*
Native Hawaiian/Pacific Islander	4%	<5%*
White	72%	84%
Other	12%	6%
Ethnicity		
Not Hispanic	85%	90%
Hispanic	15%	10%
Primary Language		
English	87%	97%
Spanish	4%	<5%*
Russian	6%	<5%*
Other	3%	<5%*

*To protect the anonymity of participants, we suppressed data for all categories with fewer than 10 people. In these cases, we indicate that the number is less than 5% of the total sample size.

Overall, the composition of individuals enrolled in the HealthConnect Hub who matched to Medicaid data largely mirrors that of the Medicaid population in the SWACH service area.

Socioeconomic Characteristics

We also explored the socioeconomic characteristics of HealthConnect Hub participants by region as shown in **Table 2** including education level, employment status, and income. There are stark differences in data availability for the two regions with more than half of the data for all three socioeconomic indicators missing for participants in Clark County. Differences in data availability may be connected to regional differences in type of program participation. Programs within the HealthConnect Hub vary in terms of the intensity of data collected by the needs assessment conducted at intake.

Table 2: Socioeconomic Characteristics of HealthConnect Hub participants, by region

	Clark County N=601	Klickitat & Skamania Counties N=243
Education		
Less than High School	3%	7%
Some High School	8%	23%
High School or GED	16%	30%
More than High School[+]	14%	26%
Missing	59%	14%
Employment		
Employed	6%	17%
Unemployed	38%	70%
Missing	55%	14%
Income		
$0-$5,000	24%	45%
$5,001-$10,000	6%	23%
$15,000 or more	8%	20%
Missing	59%	12%

[+]This group includes some college, vocational/2-year degree, 4 year degree or more, and other

For education, the largest proportion participants have completed a high school or a GED for both regions. More than a quarter of participants in Klickitat and Skamania counties have gone beyond high school to complete at least some college or vocational school.

Most participants in Klickitat and Skamania counties were unemployed and earn less than $5000 a year. Similarly, a large proportion of participants in Clark County were unemployed and nearly a quarter earned less than $5000 per year.

Section Summary

- Overall, participants in both regions served by the HealthConnect Hub are similar to the Medicaid population in the area for gender, race, ethnicity, and primary language.
- A higher percentage of participants in Klickitat and Skamania counties identify as White and speak English as their primary language compared to participants in Clark County.
- Most participants in Klickitat and Skamania counties have a least a high school degree or GED, are unemployed, and make less than $5000 a year. Data missingness for socioeconomic indicators in Clark County make it difficult to draw conclusions about this group.

Engagement with CCS

Next, we looked at length of engagement with the HealthConnect Hub by county, as measured by length of time in CCS data (**Table 3**). More than half of participants in Clark County spent less than one month in CCS data. Conversely, the majority of participants in Klickitat and Skamania counties spent at least two months or more in CCS data. Differences in length of engagement by region may be due in part to differences in program participation across the region. In this case, HealthConnect Hub participants in Klickitat and Skamania counties were more likely to be engaged in the Pathways program, one of the more intensive programs currently run through the Hub, than participants in Clark County (data not shown).

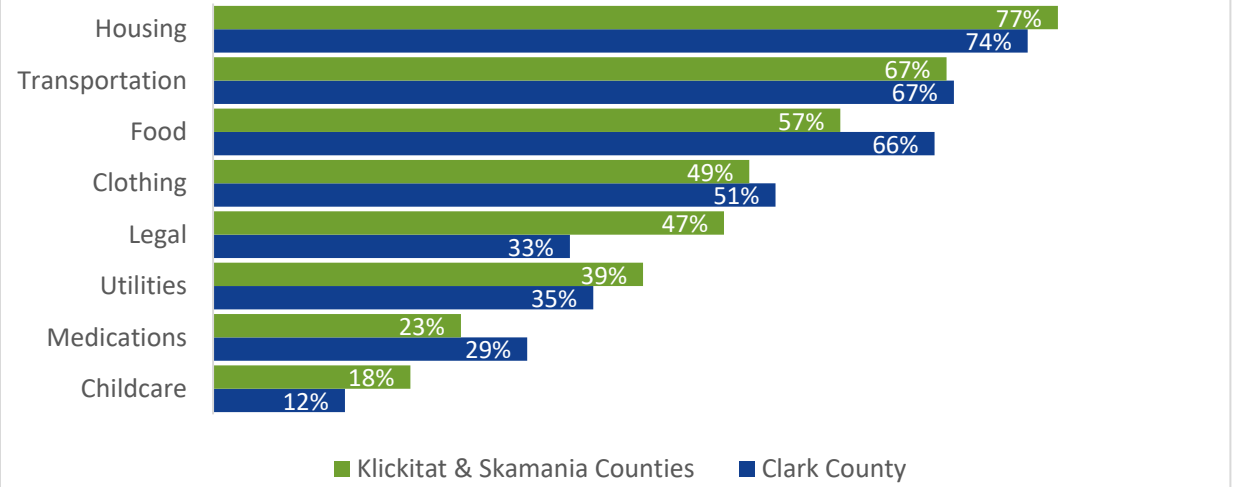
Table 3: Time spent in CCS data for HealthConnect Hub participants, by region

	Clark County N=601	Klickitat & Skamania Counties N=243
Days in CCS		
1 day	6%	2%
1 month and under	50%	15%
2-6 months	31%	40%
Over 6 months	14%	42%
Mean in days	127	213

Program Participant Needs

As part of their engagement in the HealthConnect Hub, most participants complete an initial checklist which comprehensively assesses their health, social, and economic needs. **Figure 2** presents the top needs identified by participants by county.

Figure 2: Top needs for HealthConnect Hub participants by region



Patterns of top needs are similar across the SWACH service area. About three quarters of participants in both areas identified a housing need. Transportation and food followed as the next most frequently reported needs. A higher percentage of participants in Klickitat and Skamania counties reported a legal need compared to participants in Clark County.

Section Summary

- On average, HealthConnect Hub participants in Klickitat and Skamania counties engaged in the program for substantially more days.
- HealthConnect Hub participants' needs were similar across both regions.

Chronic Conditions

We also looked at differences in participant health burden by county using Medicaid claims for chronic condition diagnoses. A higher proportion of participants in Klickitat and Skamania counties (70%) have at least one diagnosed chronic condition compared to those in Clark County (62%) (**Table 4**). A greater percentage of participants in Klickitat and Skamania counties also have a chronic physical and behavioral health diagnosis.

Table 4: Chronic condition diagnoses for HealthConnect Hub participants, by region

	Clark County N=601	Klickitat & Skamania Counties N=243
Chronic Condition Diagnosis		
None	38%	30%
At least one physical condition	20%	12%
At least one behavioral condition	18%	22%
At least one physical and behavioral condition	24%	36%

We also see differences in the types of chronic condition diagnoses by region (**Figures 3 and 4**). A greater percentage of participants in Klickitat and Skamania counties have a diagnosis of an anxiety disorder, depression, or post-traumatic stress disorder compared to participants in Clark County. For chronic physical conditions, we see similar rates of diagnoses for both regions.

Figure 3: Top three chronic behavioral health conditions for HealthConnect Hub participants by region

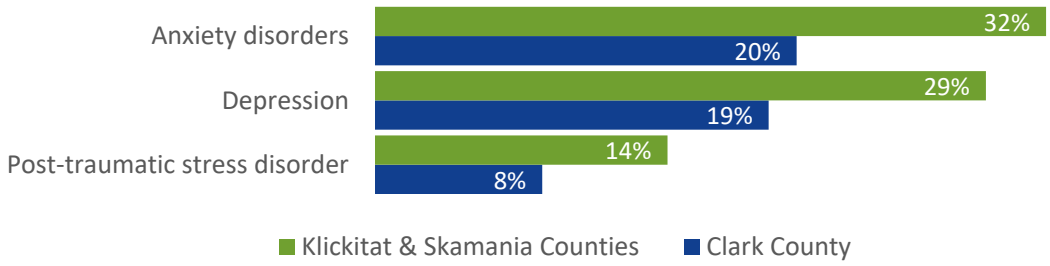
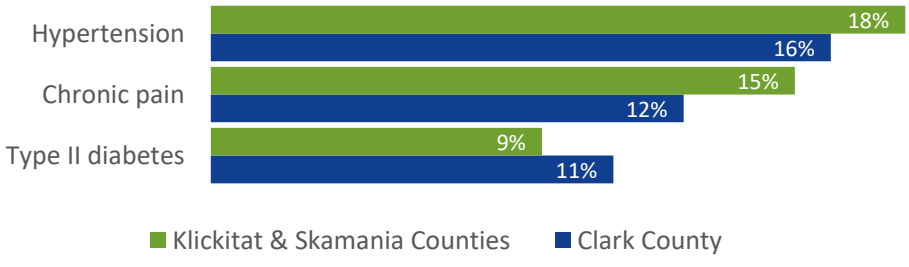


Figure 4: Top three chronic physical health conditions for HealthConnect Hub participants by region



Section Summary

- Participants in Klickitat and Skamania counties had higher rates of chronic condition diagnoses compared to those in Clark County.
- The types of chronic behavioral health condition diagnoses differed for participants across the two regions.

Health Care Utilization

Through the HealthConnect Hub, participants work in partnership with CBWs to get connected to needed social and health care services. To better understand the impact of the model, we analyzed how enrollment in the HealthConnect Hub affected health care utilization in the year following enrollment. As such, **this analysis was limited to individuals with at least 12 months of Medicaid enrollment before and after their referral or enrollment date in the HealthConnect Hub.**

Baseline Health Care Utilization by County

Because the identified regions, Clark County and Klickitat/Skamania counties, differ in terms of size and resource access, we first looked at patterns of health care utilization for HealthConnect Hub participants in the year prior to their enrollment in the HealthConnect Hub for the two regions.

Table 5 describes health care utilization for HealthConnect Hub participants in the year prior to their enrollment. Data in the table includes the percent of individuals using each type of care, as well as the average number of visits among those who used care.

Table 5: Baseline health care utilization of HealthConnect Hub participants, by county

	Clark County N=454	Klickitat & Skamania Counties N=175
	% or Mean	% or Mean
Any visit	96%	96%
Primary Care Provider		
Had a visit	77%	86%
Average visits per year	4.6	6.7
Any Dental		
Had a visit	29%	25%
Average visits per year	2.9	3.3
Outpatient Mental Health		
Had a visit	26%	37%
Average visits per year	11.3	8.1
Specialty Care		
Had a visit	43%	40%
Average visits per year	3.6	3.3
Inpatient		
Had a visit	13%	10%
Average visits per year	1.8	1.3
Emergency Department		
Had a visit	49%	51%
Average visits per year	4.4	3.5

Nearly all participants had some sort of health care visit during the baseline year. Both groups had high rates of primary and specialty care use as well as high levels of acute care use. Almost 50% of participants in both regions had an emergency department visit in the baseline year and roughly 10% had an inpatient stay.

The largest differences between participants in Clark and Klickitat/Skamania counties were in primary care utilization (77% vs. 86%) and outpatient mental health utilization (26% vs. 37%). While participants in Clark County were less likely to have an outpatient mental health visit, those who did have a visit had more visits on average compared to participants in Klickitat/Skamania counties (11.3 vs. 8.1). In the prior section, we saw that the types of chronic behavioral health diagnoses differed for participants by regions. Differences in the diagnoses may shape outpatient mental health care use.

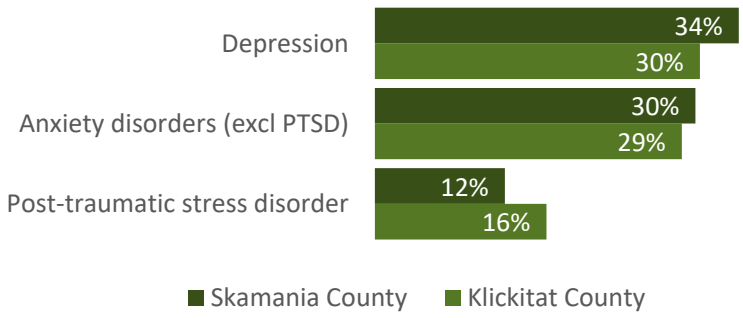
Outpatient Mental Health Care Utilization in Klickitat and Skamania Counties

Because of known differences in access to outpatient mental health care in Klickitat and Skamania counties, we also explored differences in chronic health conditions by county (**Table 6**). A similarly high rate of participants in Klickitat and Skamania counties have co-occuring physical and behavioral health condition diagnosis. However, a greater proportion of HealthConnect Hub participants in Klickitat County had no chronic condition diagnoses compared to those in Skamania County (36% vs. 23%); and a smaller proportion of Klickitat County participants had only a behavioral health diagnosis compared to Skamania County participants (17% vs. 27%). This aligns with differences in HealthConnect Hub implementation in the region. One of the primary referral partners in Skamania County is a behavioral health care provider, whereas Klickitat County has periods of time where there are no licensed behavioral health care providers in the county. Even so, we see that types of chronic behavioral health diagnoses are relatively similar for Klickitat and Skamania counties (**Figure 5**).

Table 6: Chronic condition diagnoses for HealthConnect Hub participants, by county

	Klickitat County N=119	Skamania County N=124
	%	%
Chronic Condition Diagnosis		
None	36%	23%
At least one physical condition	13%	12%
At least one behavioral condition	17%	27%
At least one physical and behavioral condition	34%	37%

Figure 5: Top three chronic behavioral health conditions among enrolled individuals by county



As might be expected, these differences also translate into divergent patterns of outpatient mental health care use (**data not shown**). Fewer than a quarter (22%) of Klickitat County participants had an outpatient mental health visit compared to a third (33%) of Skamania County participants. However, among those using care, participants in Klickitat County used outpatient mental health care more intensely compared to participants in Skamania County with a substantially higher average number of visits in the baseline year (12 visits vs. 6 visits).

Section Summary

- Participants in both regions had high rates of primary, specialty, and acute care use in the baseline year, which suggests that the HealthConnect Hub is enrolling participants in need of care coordination services.
- Differences in access to mental health care in Klickitat and Skamania counties shape participant recruitment and health care utilization patterns.

Health Care Utilization Change

Using a difference-in-difference analysis, we then examined how health care use changed over time in Clark County between individuals in the referred and enrolled groups. Because we were interested in how enrollment in the HealthConnect Hub impacts health care utilization in each region, and not how the two regions compare to one another, we analyzed utilization patterns separately by region. A population of referred individuals was used as a reference group for the respective regions.

Health Care Utilization Change in Clark County

Table 7 displays the proportion of individuals in each group using each type of care at baseline and follow-up as well as the change in the proportion of individuals in the referred and enrolled groups in Clark County over the 12-month follow-up period.

In the baseline year, referred and enrolled individuals in Clark County had high levels of primary and specialty care use as well as high levels of emergency department use. However, less than one third of individuals in both groups had a dental care visit in the baseline year. While utilization patterns were relatively similarly for the two groups across most types of care, we do see differences in the use of inpatient care (7% vs. 13%) and specialty care (48% vs. 43%). These differences may indicate that referred individuals had better access to needed care compared to enrolled individuals in the baseline year.

Table 7: Difference in change in health care utilization over time between Referred (N=118) and Enrolled (N=454) participants in Clark County

	Referred N=118		Enrolled N=454		DiD*	
	Baseline	Post-Period	Baseline	Post-Period	Difference	p-value
Primary Care Provider	74%	69%	77%	77%	4.3%	0.51
Any Dental	28%	25%	29%	33%	7.0%	0.27
Outpatient Mental Health	24%	19%	26%	29%	7.4%	0.21
Specialty Care	48%	36%	43%	45%	13.3%	0.064
Inpatient	7%	10%	13%	12%	-3.5%	0.41
Emergency Department	46%	46%	49%	45%	-4.0%	0.56

* Adjusted for age (continuous), Chronic Illness and Disability Payment (CDPS) score, gender, race (white/other), ethnicity, and language (English/other)

Looking at changes in health care use between the two groups over time, we see a significant change in specialty care use between referred and enrolled individuals. The proportion of referred individuals utilizing specialty care dropped from 48% at baseline to 36% at follow-up, whereas the proportion of enrolled individuals accessing specialty care increased from 43% at baseline to 45% at follow-up over the same period. Given the difficulties Medicaid patients often face when seeking specialty care, this finding suggests that support from CBWs may have helped enrolled individuals access needed care.

In contrast, we did not observe significant differences in the proportion of individuals using primary care, dental care, outpatient mental health care, inpatient care, or emergency department visits over time. Even so, we do observe promising trends in utilization with the proportion of HealthConnect Hub participants using acute care (e.g., inpatient and emergency department care) decreasing and the proportion of participants using ambulatory care (e.g., primary care, dental, outpatient mental health) staying steady or increasing.

We then examined differences in the average amount of care per member per year between individuals in the referred and enrolled groups among those who used care. Among the enrolled group we saw decreases in the average number of inpatient stays and emergency department visits, whereas the average number of acute care visits increased for the referred group (**Figures 6 and 7**). However, these differences in acute care use were not statistically significant.

Overall, although not significant, we see positive trends with respect to acute care use in Clark County. Compared to the referred group, fewer enrolled individuals used acute care. Moreover, among the enrolled individual who used care, they used less care on average.

We also assessed change in average amounts of primary care visits, specialty care visits, dental care use, and outpatient mental health visits but observed no significant differences over time between the two groups (see Supplemental Figures and Tables).

Figure 6: Average Inpatient Stays in Clark County, by enrollement status

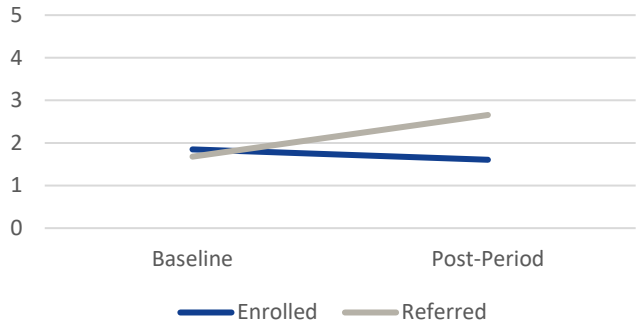
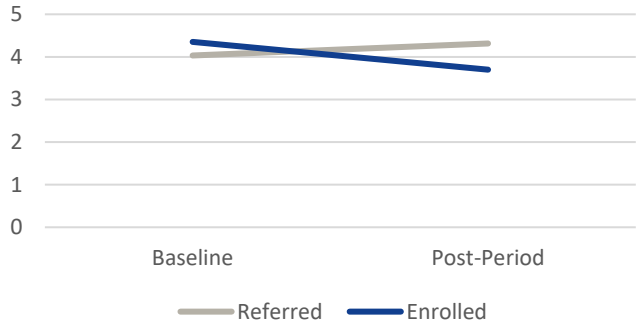


Figure 7: Average Emergency Department Visits in Clark County, by enrollment status



Section Summary

- Engagement with the HealthConnect Hub had a positive impact on connections to specialty care for participants in Clark County.
- For acute care use, we see fewer enrolled individual using care in the post-period relative to the referred group. We also see fewer average acute care visits among enrolled individuals compared to the baseline year.

Change in Utilization Over Time in Klickitat and Skamania Counties

We then conducted a difference-in-difference analysis to assess how health care utilization changed over time between the referred and enrolled groups in Klickitat and Skamania counties. To protect the anonymity of participants, we suppressed all table cells with less than 10 people; in these instances, we indicated that the number was less than 30% of the total sample size.

Nearly all referred and enrolled individuals in Klickitat and Skamania counties used some type of health care in the baseline year, as we might anticipate given the high level of health burden among participants. Overall, more than half of individuals in both groups had an emergency department visit in the baseline year as well as high levels of primary care and specialty care use. Less than a quarter of all referred and enrolled individuals had any dental care visit in the baseline year.

The largest differences between the referred and enrolled groups were in emergency department visits (69% vs. 51%). While individuals in the referred group were less likely to have used dental and outpatient mental health care, we see a similar proportion of individuals from both groups using primary care and specialty care. These differences in use between the two groups may indicate that individuals in the referred group had more difficulties successfully accessing needed care in a timely manner.

Table 6: Difference in change in health care utilization over time between Referred and Enrolled participants in Klickitat and Skamania counties

	Referred N=32		Enrolled N=172		DiD*	
	Baseline	Post-Period	Baseline	Post-Period	Difference	p-value
Primary Care Provider	81%	75%	85%	89%	10.3%	0.37
Any Dental	<30%	41%	25%	32%	-13.3%	0.24
Outpatient Mental Health	<30%[+]	<20%[+]	37%	47%	15.8%	0.15
Specialty Care	44%	47%	40%	47%	1.9%	0.89
Inpatient	<30%[+]	<20%[+]	10%	13%	10.3%	0.35
Emergency Department	69%	63%	51%	52%	5.2%	0.69

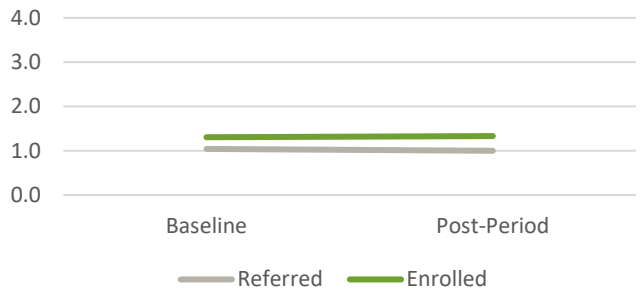
* Adjusted for age (continuous), Chronic Illness and Disability Payment (CDPS) score, gender, race (white/other), ethnicity, and language (English/other)

[+] To protect the anonymity of participants, we suppressed data for all categories with fewer than 10 people. In these cases, we indicate that the number is less than 30% of the total sample size at baseline and to show the direction of change the post-period, we indicate the number is <20%.

Examining the change in health care use over time, there were no significant differences between the two groups in the proportion of individuals using primary care, dental care, outpatient mental health care, or specialty care (**Table 6**) over the evaluation period. We also did not observe a significant change in acute care utilization between the two groups over the evaluation period.

We also examined differences in the average amount of care per member per year between individuals in the referred and enrolled groups among those who used care. The mean number of inpatients stays among those who used care stayed relatively stable for both referred and enrolled individuals in Klickitat and Skamania counties over the follow-up year (**Figure 8**). The mean number of emergency department visits among those who used care decreased for both groups with a slightly sharper decrease among enrolled individuals (**Figure 9**).

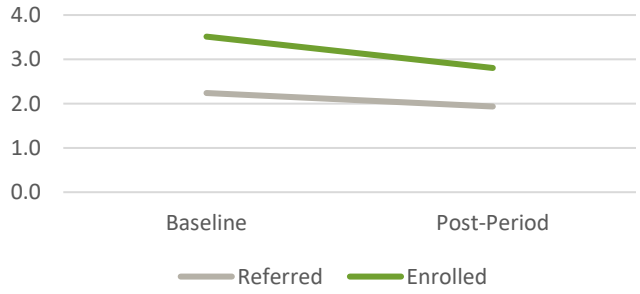
Figure 8: Average Inpatient Stays in Klickitat and Skamania Counties, by enrollment status



Overall, engagement in the HealthConnect Hub did not seem to impact acute care use in Klickitat and Skamania counties. Conversely, we see a slight increase in the proportion of enrolled individuals using acute care relative to referred individuals.

We also assessed changes in the average amounts of primary care visits, specialty care visits, dental care use, and outpatient mental health visits but observed no significant differences over time between the two groups (see Supplemental Figures and Tables).

Figure 9: Average Emergency Department Visits in Klickitat and Skamania Counties, by enrollment status



Section Summary

- Engagement with the HealthConnect Hub had a positive impact on connection to mental health outpatient care for participants in Klickitat and Skamania counties.

Conclusion & Recommendations

Conclusion

For individuals with complex health and social needs, systems of care can be challenging to navigate. SWACH has leveraged the HealthConnect Hub model to better coordinate care in the region and advance whole person care for the populations it serves.

In this report, we explored the impact of the HealthConnect Hub by county. Because Clark, Klickitat, and Skamania counties vary substantially in terms of population size, rurality, and availability of resources, it is important to understand how the model works across the different counties.

We see differences in HealthConnect Hub participation in terms of participant demographics, length of program engagement, and chronic health burden. And, while participants across the SWACH service area report high levels of social need and a high burden of chronic disease, health needs also differed across the two regions. Unique implementation partners across the region help to shape these differences. A greater percent of participants in Skamania County had a chronic behavioral health diagnosis. This may be, in part, because a mental health care provider is a primary referral agency for the HealthConnect Hub in that area.

Given these differences, it may be unsurprising that the impact of the HealthConnect Hub differed across the region. In the 12 months after enrollment, engagement with the HealthConnect Hub in Clark County resulted in a greater connection to specialty care services, although not necessarily an increase in the number of visits. We also saw positive trends in acute care use with both the proportion of enrolled participants using care and the average number acute care visits decreasing.

In Klickitat and Skamania counties, we saw positive patterns related to engagement with the HealthConnect Hub and increased connections to primary and outpatient mental health care, but not necessarily more visits. Altogether, these findings highlight the importance of understanding how the needs of the region differ and how the work of HealthConnect Hub CBWs can be tailored to meet those needs.

Recommendations

To realize the potential benefits of the community-based care coordination model, the following recommendations should be considered as SWACH continues to implement, grow, and sustain the HealthConnect Hub.

1. **Continue to identify and employ successful strategies to engage traditionally underserved communities.** Data in this report highlight SWACH's ability to successfully engage several priority populations including people struggling with housing and people with high health burden. Even so, program participants are largely White and English-speaking. While this generally reflects the demographics of the Medicaid population in the region, it also indicates that SWACH may need to continue trying new strategies -- in addition to continuing successful ones -- to better engage to marginalized and/or historically oppressed racial and ethnic groups. These strategies could include partnering with culturally specific community organizations or recruiting CBWs representative of these communities they serve.

2. **Monitor the characteristics of participation across the region.** Data show how the HealthConnect Hub differs across the region in terms of participant characteristics, length of

engagement, and health needs. Continued awareness of participant needs can help inform how SWACH supports integrated partners and CBWs working in these regions. Moreover, understanding who participants are and what their needs are will allow SWACH to better tailor its partnerships and outreach to meet the needs of the people they serve through the HealthConnect Hub. As such, continued monitoring of participation characteristics may further support the strategic growth of the HealthConnect Hub model and help ensure its sustainability in years to come.

3. **Support strategies to meet participant need across regional differences.** Report findings underscore a wide range of contextual differences that affect how the HealthConnect Hub model gets implemented across the SWACH service area. Even rural areas differed as shown by the gaps in behavioral health diagnosis and outpatient mental health care use in Klickitat and Skamania counties. While SWACH has limited control over things like the relative scarcity of health providers in rural regions or the distance that a participant may have to travel for care, SWACH can work with integrated health partners to better understand the opportunities and barriers that exist for its partners across the region. Leveraging this understanding will allow SWACH to better tailor support for HealthConnect Hub operations to its different integrated health partners as well as allowing for more relevant support the work of the CBWs within these distinct communities.

4. **Ensure that supports and infrastructure are right sized to each program.** Findings in this report highlight some of the programmatic differences in the HealthConnect Hub offerings. Participants in Klickitat and Skamania counties were more likely to be enrolled in Pathways and engaged for substantially longer compared to participants in Clark County. Because HealthConnect Hub programs can vary widely, it can be difficult to clearly understand how things are working for the purposes of monitoring quality improvement efforts and assessing impact and when considering the HealthConnect Hub as a whole. Differences in program scale should also inform CBWs engagement in terms of appropriate supports, needed trainings, and models of payment that compensate adequately.

5. **Leverage the value of a networked approach.** As this report highlights, the health needs of HealthConnect Hub participants vary across the region. By helping to bring together a care coordination ecosystem that consists of community-based organizations specializing in meeting participants' physical health, behavioral health, and social needs, the HealthConnect Hub model is well poised to meet these differing needs by leveraging a networked approach. Within the established care coordinated ecosystem, partnerships with specialized organizations can be prioritized to tailor resources and services within the model to better meet participant needs. Continuing to support the growth of this network as the needs of participants shift over time will help to ensure that the HealthConnect Hub is responsive to the community.

Appendices

Comparability of Referred and Enrolled Individuals

A primary goal of this report was to examine the ways in which participation in the HealthConnect Hub varies across the region. Because of this focus, we limited the analysis in the report to assess descriptive differences in HealthConnect Hub participants by county. However, to understand changes over time in health care utilization between referred and enrolled individuals, it is helpful to know how similar these groups are at the baseline of the evaluation period. To understand the utility of using referred individuals as a comparison group for differences in health care utilization over time, we compared characteristics for referred and enrolled individuals for each region.

Compared to referred individuals in Clark County, HealthConnect Hub enrollees were:

- More likely to be female
- More likely to spend more days in CCS data

Otherwise, the two groups were similar in terms of demographics and chronic disease diagnoses.

Compared to referred individual in Klickitat and Skamania counties, HealthConnect Hub enrollees were:

- More likely to identify as Hispanic/Latinx
- More likely to spend more days in CCS data

Otherwise, the two groups were similar in terms of demographics and chronic disease diagnoses. To help account for differences between groups, we adjusted for age (continuous), CDPS score, gender, race (White/other), ethnicity, and language (English/other) in the difference-in-difference models.

Supplemental Tables and Figures

Figures A1-A4 show the change in the percent in the per member per year average number of health care visits between baseline and the twelve-month post-period for the enrolled and referred group in Clark Counties for primary care visits, dental care visits, outpatient mental health care visits, and specialty care visits. For those who did use care, the average number of primary care and specialty care visits per member per year increased from baseline to the post-period, but the difference was not statistically significant. For dental care visits, the average number of visits among those who used care decreased for enrolled individuals and referred individuals over the evaluation period, but the differences were not significant. Finally, average number of visits per member per year stayed the same for enrolled individuals in Clark County and increased for referred individuals. Again, these differences were not significant.

Figure A1: Average Primary Care Visits in Clark County, Referred (N=118) and Enrolled (N=454)

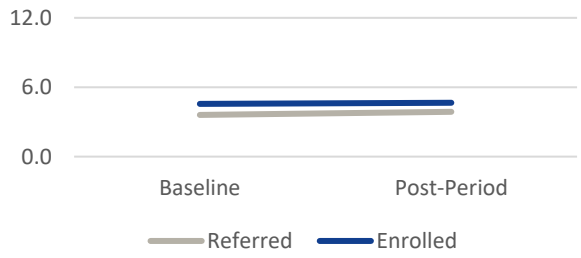


Figure A2: Average Dental Care Visits in Clark County, Referred (N=118) and Enrolled (N=454)

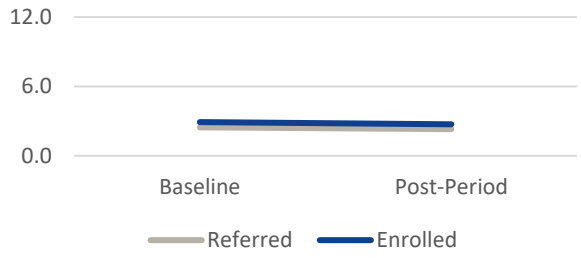
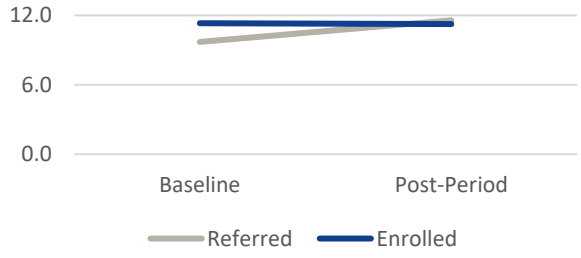
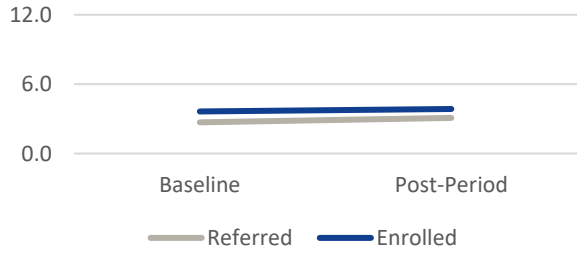


Figure A3: Average Mental Health Outpatient Visits in Clark County, Referred (N=118) and Enrolled (N=454)



A4: Average Specialty Care Visits in Clark County, Referred (N=118) and Enrolled (N=454)



Figures A5-A8 show the change in the percent in the per member per year average number of health care visits between baseline and the twelve-month post period for both the enrolled and referred group in Klickitat and Skamania counties for primary care visits, dental care visits, outpatient mental health care visits, and specialty care visits. For those who did use care, the average number of specialty care visits per member per year increased from baseline to the post-period for enrolled individuals and decreased for referred individuals, but the difference between the enrolled and referred groups was not statistically significant. For primary care, dental care, and mental health outpatient care visits, the average number of visits among those who used care decreased for enrolled individuals and increased for referred individuals over the evaluation period, however these differences were not statistically significant.

Figure A5: Average Primary Care Visits in Klickitat and Skamania Counties, Referred (N=32) and Enrolled (N=172)

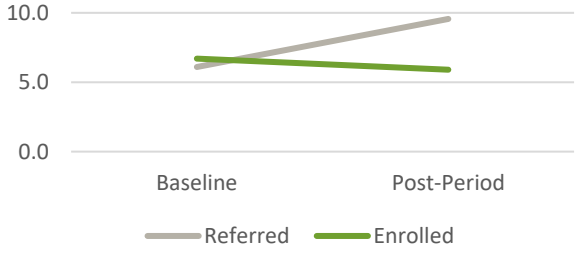


Figure A6: Average Dental Care Visits Klickitat and Skamania Counties, Referred (N=32) and Enrolled (N=172)

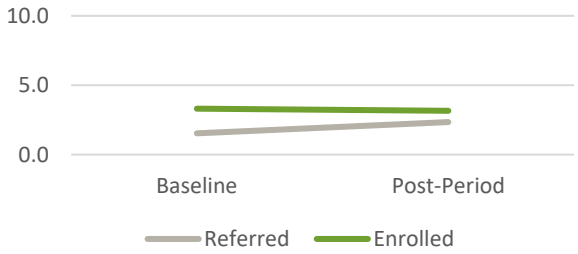


Figure A7: Average Outpatient Mental Health Visits in Klickitat and Skamania Counties, Referred (N=32) and Enrolled (N=172)

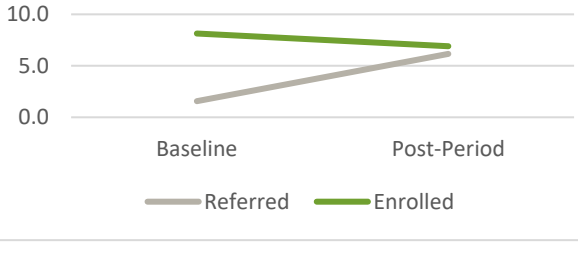


Figure A8: Average Specialty Care Visits Klickitat and Skamania Counties, Referred (N=32) and Enrolled (N=172)