

Full Service Partnership (FSP) Outcomes

Findings from 2020-2021 Fiscal Year

Manxi Yang, MPP

San Mateo County Behavioral Health and Recovery Services

April 2022



Advancing Evidence.
Improving Lives.

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Executive Summary

Full Service Partnerships (FSPs) are a set of enhanced, integrated services administered through San Mateo County contracted providers to assist individuals with mental and behavioral health challenges. The American Institutes for Research (AIR) is working with San Mateo County (“the County”) to understand how enrollment in FSP promotes resilience and improves health outcomes of individuals served. Two data sources are used for this report: (1) self-reported survey data are collected by providers from FSP clients, (hereafter, “partners”) and (2) electronic health records (EHR) obtained through the County’s Avatar system. In the County there are currently four comprehensive FSP providers: Edgewood Center and Fred Finch Youth Center (hereafter, Edgewood/Fred Finch)¹ serving children, youth, and transition age youth; and Caminar and Telecare serving adults and older adults. *This year’s report includes data from all FSP providers but only included Telecare data from December 2018 to June 2021. Telecare changed its EHR system for the FSP program data and is having technical difficulties providing the data prior to the change of the EHR system. Due to this change, we report data from Telecare separately.*

Exhibit 1 presents outcomes for child (16 years and below), transitional age youth (TAY) (16-25 years), adult (25 to 59 years), and older adult (60 years and older) clients (hereafter referred to as “partners”) of the Full Service Partnership (FSP) program in the County. In some cases, the EHR data will have a larger sample size than the survey data, as partners did not always complete the program surveys. Survey data presented in Exhibit 1 is obtained only from Edgewood/Fred Finch and Caminar. Due to changes in the reporting systems for Telecare, their data is provided in Exhibit 3.

For all outcomes, we compared the year just prior to enrollment in a FSP and the first year enrolled in FSP. Red (and bold) font in Exhibit 1 indicates percent change that was not favorable (e.g., worse academic grades for children and TAY partners; 4 out of 32 outcomes). Percent improvement is the change in the number of partners with the outcome of interest (e.g., homelessness, incarceration, employment) in the year after joining FSP relative to the year prior to participating in FSP. For example, the number of adult partners experiencing homelessness changed from 46 before FSP enrollment to 34 in the first year following FSP enrollment, a 26% improvement. We first provide self-reported and EHR outcomes for adults and older adults followed by child and TAY partners.

¹ The self-reported data from Edgewood Center and Fred Finch Youth Center is combined into one dataset, therefore, we refer to both centers as Edgewood/Fred Finch in this report to be consistent with the data.

Self-reported outcomes for adults and older adults: For adults and older adults, the majority of self-reported outcomes improved from the year prior to enrollment to the first year enrolled in a FSP.

- 10 out of 16 outcomes improved for both adult and older adult partners, including fewer partners experiencing homelessness, arrests, mental health emergencies, physical health emergencies, and active substance use disorders.
- Three outcomes only improved for adult partners, including fewer detentions or incarcerations, more employment, and more partners reporting substance use disorder treatment, which may indicate that the integrated care and case management services offered through FSP connected adult partners with needed care. There was no change on detention or incarceration for older adults, however, when looking at arrests, fewer older adult partners reported being arrested from the year prior to the first year during FSP enrollment. Also, older adults did not report changes on employment, which may be because they mostly are not in workforce. One outcome worsened for older adult partners: fewer partners reported receiving substance use disorder treatment.

Healthcare utilization (EHR data) for adults and older adults: For adult and older adult partners, we detected statistically significant changes in outcomes from the year before FSP compared to the first year in FSP for all healthcare utilization outcomes. Compared to the year before joining a FSP, there was a:

- Decrease in the percent of partners with any hospitalization
- Decrease in mean hospital days per partner
- Decrease in percent of partners using any psychiatric emergency services (PES), and
- Decrease in mean PES event per partner

Self-reported outcomes for child and TAY partners: Similar trends are seen for child and TAY partners where most of the self-reported outcomes improved from the year prior to enrollment to the first year enrolled in a FSP.

- 10 out of 16 outcomes improved for both child and TAY partners, including reduced homelessness, arrests, mental and physical health emergencies, and school suspensions.
- Two outcomes only improved for TAY partners, including fewer detentions or incarcerations and increased school attendance. Detention or incarceration did not change for child partners. However, for child partners, when looking at arrests, there were significant decreases between the year prior to FSP and the first year after FSP enrollment (62 in the year just prior compared to 10 in the first year with FSP).

- Three outcomes worsened for child or TAY partners. Child and TAY partners reported decreased academic grades during the first year after enrolling in a FSP program. Child partners also reported decreased attendance after enrollment.

Healthcare utilization (EHR data) for child and TAY partners: For child and TAY partners, we detected statistically significant changes in outcomes from the year before FSP compared to the first year in FSP for all healthcare utilization outcomes. Compared to the year before joining a FSP, there was a:

- Decrease in the percent of partners with any hospitalization
- Decrease in mean hospital days per partner
- Decrease in percent of partners using any psychiatric emergency services (PES), and
- Decrease in mean PES event per partner

Exhibit 1. Percent Change in Outcomes by Age Group, Year before FSP Compared with First Year with FSP

FSP Outcomes <i>Self-reported Outcomes</i>	Adult (25 to 59 years) N = 113			Older adult (60 years & older) N = 19		
	<i>Yr before</i>	<i>Yr after</i>	<i>change</i>	<i>Yr before</i>	<i>Yr after</i>	<i>change</i>
Homelessness	46 (41%)	34 (30%)	-26%	3 (16%)	1 (5%)	-67%
Detention or Incarceration	35 (31%)	22 (19%)	-37%	2 (11%)	2 (11%)	0%
Employment	0 (0%)	3 (3%)	N/A	0 (0%)	0 (0%)	N/A
Arrests	24 (21%)	4 (4%)	-83%	2 (11%)	0 (0%)	-100%
Mental Health Emerg.	84 (74%)	29 (26%)	-65%	10 (53%)	2 (11%)	-80%
Physical Health Emerg.	49 (43%)	17 (15%)	-65%	6 (32%)	3 (16%)	-50%
Active S.U. Disorder	60 (53%)	55 (49%)	-8%	4 (21%)	3 (16%)	-25%
S.U. Treatment	27 (24%)	33 (29%)	22%	3 (16%)	2 (11%)	-67%
Healthcare Utilization <i>(EHR data)</i>	Adult (25 to 59 years) N = 342			Older adult (60 years & older) N = 62		
	<i>Yr before</i>	<i>Yr after</i>	<i>change</i>	<i>Yr before</i>	<i>Yr after</i>	<i>change</i>
Hospitalization	122 (36%)	56 (16%)	-54%	18 (29%)	12 (19%)	-33%
Hospital Days per partner	12.1	4.2	-66%	10.5	5.5	-48%
PES	184 (54%)	133(39%)	-28%	25 (40%)	15 (24%)	-40%

PES Event per partner	1.7	1.0	-38%	1.1	0.6	-49%
FSP Outcomes Self-reported Outcomes	Child (16 years and younger) N = 201			TAY (17 to 25 years) N = 250		
	Yr before	Yr after	change	Yr before	Yr after	change
Homelessness	9 (4%)	6 (4%)	-33%	33 (13%)	32 (13%)	-3%
Detention or Incarceration	29 (14%)	29 (14%)	0%	38 (15%)	32 (13%)	-16%
Arrests	62 (31%)	10 (5%)	-84%	119 (48%)	20 (8%)	-83%
Mental Health Emerg.	69 (34%)	8 (4%)	-88%	114 (46%)	25 (10%)	-78%
Physical Health Emerg.	14 (7%)	1 (0%)	-93%	55 (22%)	5 (2%)	-91%
Suspension	44 (22%)	20 (10%)	-55%	24 (10%)	5 (2%)	-79%
Grade	3.39	3.06	-10%	3.21	3.15	-2%
Attendance	2.20	1.95	-11%	2.40	2.48	3%
Healthcare Utilization (EHR data)	Child (16 years and younger) N =211			TAY (17 to 25 years) N = 201		
	Yr before	Yr after	change	Yr before	Yr after	change
Hospitalization (N)	10 (5%)	3 (1%)	-70%	26 (13%)	16 (8%)	-38%
Hospital Days per partner	1.3	0.1	-91%	5.1	2.2	-57%
PES (N)	51 (24%)	22 (10%)	-57%	87 (43%)	54 (27%)	-38%
PES Event per partner	0.5	0.2	-56%	1.1	0.7	-31%

Note. Exhibit 1 above indicates the change in the number of partners with outcome of interest, comparing the year just prior to FSP with the first year on FSP. Counts are presented in Exhibit 1 to indicate the number of partners with outcome of interest and percentages are presented in the parenthesis. For example, in Yr before, there were 46 adults that experienced homelessness, which is 41% of all 113 adults, then in the Yr after, there were 34 adults, which is 30% of all adults that experienced homelessness. Percent change in ratings indicates the change in the average rating for the first year on the program as compared to the year just prior to FSP. For self-reported outcomes, there are only 19 older adult partners, therefore, caution is needed when interpreting the results with small sample size. The percent difference with employment is reported as N/A because the percent of partners with employment was 0% in the Yr before (from 0% to 0% or 0% to 3%). Thus, the denominator is 0. Red (and bold) font indicates outcomes that worsened, such as lower school attendance for child partners or lower grades for child and TAY partners.

When looking at healthcare utilization outcomes across years for all cohorts, the reductions are consistently observed over the years since the inception of the FSP program. There are 816 partners who joined the FSP program since 2006 and have health utilization data in the EHR. Among these partners, we looked at their change in outcomes between the first year of FSP

and the year prior to FSP. As shown in Exhibit 2, we calculated the overall improvement as the mean change across all 816 partners for people who joined FSP from 2006 to 2020. Then we present the range of improvement, which is the lowest to the highest improvement across years.

Exhibit 2. Overall and Range of Improvement across Years on Health Utilization Outcomes

Health Utilization Outcomes*	Overall Improvement	Range (Partnerships Beginning 2006 – 2020)
<i>Healthcare Use (EHR data, N= 816)</i>		
Partners with Hospitalizations	51%	17% – 75%
Mean Hospital Days	63%	(7%) – 87%
Partners with PES	35%	12% – 60%
Mean PES Events	39%	9% – 68%

* These outcomes are presented overall for all clients as well as by year of partnership; the range presented is from the lowest to highest percent changes among the calendar years (2006-2021).

Telecare changed its electronic healthcare record (EHR) system on December 1, 2018, and was only able to provide the data after the conversion date due to data reliability issues. Due to the incompleteness of the Telecare data, we conducted a separate analysis for Telecare. There are 40 partners in the Telecare survey data who have completed at least a year of the FSP as of June 30, 2021. Our analysis combined all age groups for this separate analysis because of the small sample size. Exhibit 3 shows improvements for Telecare partners on homelessness, incarceration, arrests, physical health emergencies, and active substance use disorder. The Telecare partners did not have improvements on employment, more frequently reported having mental health emergencies, and fewer reported having substance use disorder treatments.

Exhibit 3. Percent Change in Outcomes among Telecare partners, Year before FSP Compared with First Year with FSP

FSP Outcomes <i>Self-reported Outcomes</i>	Everyone N = 40		
	<i>Yr before</i>	<i>Yr after</i>	<i>change</i>
Homelessness	9 (23%)	6 (15%)	-33%
Detention or Incarceration	1 (3%)	0 (0%)	-100%

Employment	0 (0%)	0 (0%)	N/A
Arrests	6 (15%)	0 (0%)	-100%
Mental Health Emerg.	11 (28%)	14 (35%)	27%
Physical Health Emerg.	6 (15%)	1 (3%)	-83%
Active S.U. Disorder	23 (58%)	10 (25%)	-57%
S.U. Treatment	3 (8%)	0 (0%)	100%

Note. Exhibit 3 indicates the change in the percent of partners with any events, comparing the year just prior to FSP with the first year on FSP. For Telecare’s self-reported outcomes, there are 40 partners, therefore, caution is needed when interpreting the results with small sample size. The percent difference with employment is reported as N/A because the percent of partners with employment did not change (from 0% to 0%). Thus, the denominator is 0. Red (and bold) font indicates outcomes that worsened, e.g., more frequently reported mental health emergencies.

Background and Introduction

The Mental Health Services Act (MHSA) was enacted in 2005 and provides a dedicated source of funding to improve the quality of life for individuals living with mental illness. In San Mateo County (the County), a large component of this work is accomplished through Full Service Partnerships (FSP). FSP programs provide individualized integrated mental health services, flexible funding, intensive case management, and 24-hour access to care (“whatever it takes” model) to help support recovery and wellness for persons with serious mental illness (SMI) and their families. In the County there are currently four comprehensive FSP providers: Edgewood Center and Fred Finch Youth Center (hereafter, Edgewood/Fred Finch)² serving children, youth, and transition age youth; and Caminar and Telecare serving adults and older adults.

The County has partnered with the American Institutes for Research (AIR) to understand how enrollment in the FSP is promoting resiliency and improving health outcomes of the County’s clients living with mental illness. Two data sources are used for this report: (1) self-reported survey data are collected by providers from FSP clients, (hereafter, “partners”) and (2) electronic health records (EHR) obtained through the County’s Avatar system.

This year’s report includes data from all FSP providers but only included Telecare data from December 2018 to June 2021. Telecare changed its EHR system for the FSP program data and is having technical difficulties providing the data prior to the change of the EHR system.

Initial survey data are collected by providers via an intake assessment, called the Partnership Assessment Form (PAF), which includes information on well-being across a variety of measures (e.g., living in a residential setting) at the start of FSP and over the twelve month “lookback” window of the year prior to FSP enrollment. While participating in the FSP, survey data on partners is gathered in two ways. Life changing events are tracked by Key Event Tracking (KET) forms, which are triggered by any key event (e.g., a change in residential setting). Partners are also assessed regularly with Three Month (3M) forms. Changes in partner outcomes are gathered by comparing data on PAF forms to data compiled from KET and 3M forms.

EHR data collected through the County Avatar system contain longitudinal partner-level information on demographics, FSP program participation, hospital stays, and psychiatric emergency services (PES) utilization before and after the enrollment date within the County health system. The Avatar system is limited to individuals who obtain care in the County health system. Hospitalizations outside of the County, or in private hospitals, are not captured.

² The self-reported data from Edgewood Center and Fred Finch Youth Center is combined into one dataset, therefore, we refer to both centers as Edgewood/Fred Finch in this report to be consistent with the data.

This report presents changes in partners' self-reported and hospitalization outcomes in two consecutive years: (1) the baseline year, i.e., the 12 months prior to enrollment in the FSP program, and (2) the first full 12 months of the partner's FSP participation. Children (aged 16 and younger), transition aged youth (TAY; aged 17 to 25), adults (aged 25 to 59), and older adults (aged 60 and older) were included in the analysis if they had completed at least one full year with the FSP program by June 30, 2021 (the data acquisition date). Trends in EHR data are subsequently presented as an average across all years of the program as well as annually, by year of FSP program enrollment. Note that the difference in the number of partners between the self-reported and EHR data is due to the difference in age group definition (see Appendix C) and not every partner has a health care record in the County's EHR system.

Appendices provide details on our methodology as well as detailed findings for specific outcomes. Appendix A presents additional detail on residential outcomes. Appendix B provides outcomes for individual FSP providers. Appendix C provides methodology for both the self-reported outcomes and the EHR-based hospitalization outcomes.

Self-reported outcomes

Overview

The following section presents outcomes for: 201 child (aged 16 and younger) FSP partners; 250 TAY (aged 17 - 25) FSP partners; 113 adult (aged 26-59) FSP partners; and, 19 older adult (aged 60 and older) FSP partners who joined and completed at least a year in FSP since 2006. The results compare the first year enrolled in an FSP with the year just prior to FSP enrollment for partners completing at least one year in an FSP program.

Outcomes Assessed. Several outcomes are broken down by age category, as described below. Note that employment, homelessness, arrests and incarceration outcomes are not presented for adults aged 60 or older, as there are insufficient observations in this age group for meaningful interpretation (i.e., there are fewer than 5 older adult partners total with any of these events).

1. **Partners with any reported homelessness incident:** measured by residential setting indicating homelessness or emergency shelter (PAF and KET).
2. **Partners with any reported detention or incarceration incident:** measured by residential setting indicating Jail or Prison (PAF and KET).

3. **Partners with any reported employment:** measured by employment in past 12 months and date employment change (PAF and KET).³
4. **Partners with any reported arrests:** measured by arrests in past 12 months and date arrested (PAF and KET).
5. **Partners with any self-reported mental health emergencies:** measured by emergencies in past 12 months and date of mental health emergency (PAF and KET).
6. **Partners with any self-reported physical health emergencies:** measured by emergencies in past 12 months and date of acute medical emergency (PAF and KET).
7. **Partners with any self-reported active substance use disorder:** measured by self-report in past 12 months and captured again in regular updates (PAF and 3M).
8. **Partners in substance use disorder treatment:** measured by self-report in past 12 months and captured again in regular updates (PAF and 3M).⁴

In addition, we also examine three outcomes specific to child and TAY partners:

1. **Partners with any reported suspensions:** measured by suspensions in past 12 months (PAF) and date suspended (KET).
2. **Average school attendance self-rating:** an ordinal ranking (1-5) indicating overall attendance; measured for past 12 months (PAF), at start of FSP (PAF), and over time on FSP (3M).
3. **Average school grade self-rating:** an ordinal ranking (1-5) indicating overall grades; measured for past 12 months (PAF), at start of FSP (PAF), and over time on FSP (3M).

Mental and physical health emergencies by living situation. Mental and physical health emergencies are considered in conjunction with residential status for all age groups combined. Specifically, we explore the likelihood of an emergency in relation to whether the partner’s living situation in their first year of FSP participation is “advantageous” (i.e., living with family or foster family, living alone and paying rent, or living in group care or assisted living) or “higher risk” (i.e., homeless, incarcerated, or in a hospitalized setting).

Telecare changed its electronic healthcare record (EHR) system on December 1, 2018 and was only able to provide the data after the conversion date due to data reliability issues. Due to the incompleteness of the Telecare data, we conducted a separate analysis for Telecare. Below we present the findings from the analysis of Caminar and Edgewood/Fred Finch combined data

³ Employment outcome is not applicable to child and TAY partners.

⁴ If more partners reported receiving substance use disorder treatment in the year following their FSP enrollment, it may indicate that the integrated care and case management services offered through FSP connected partners with needed care.

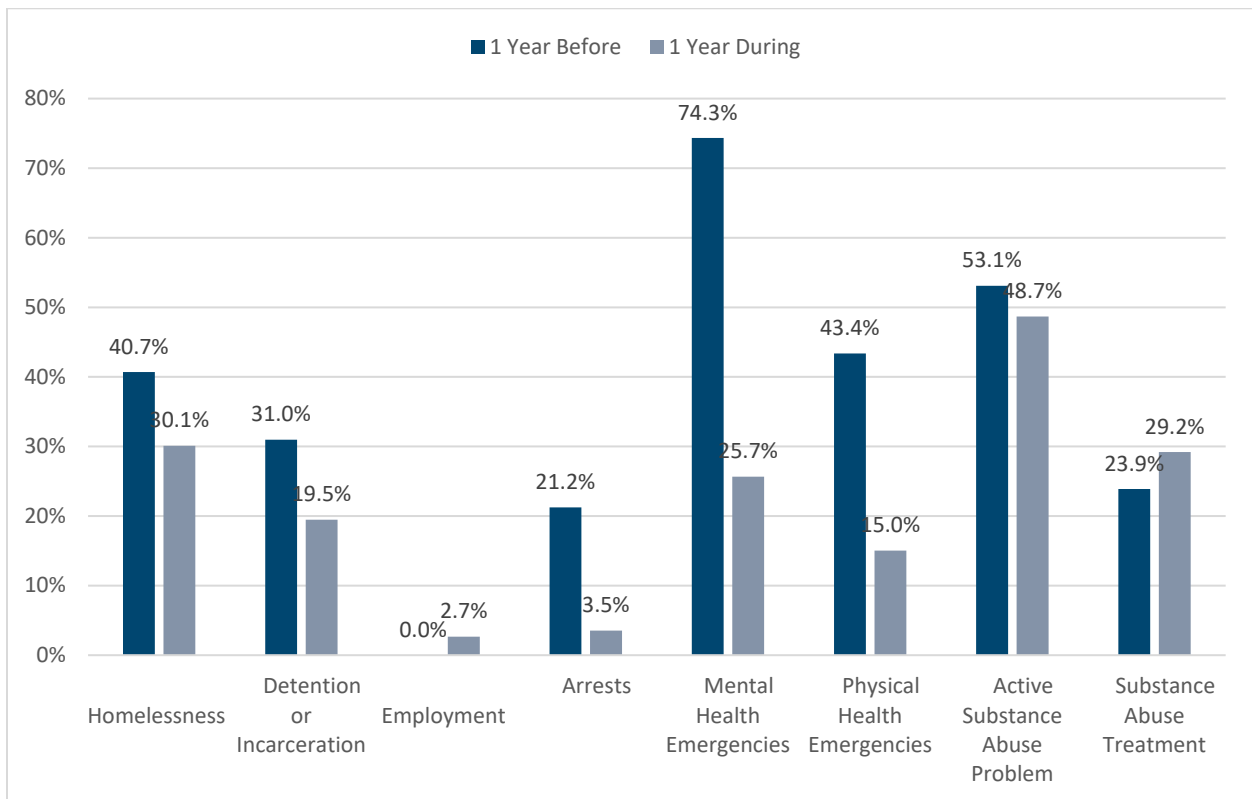
since FSP inception—the main analysis, and the findings from the analysis using Telecare data from December 2018.

Caminar and Edgewood/Fred Finch

Self-Reported Outcomes by Age Group

Adults. Exhibit 4 compares outcomes for adult partners in the year prior to FSP enrollment with the first year in a FSP. Homelessness, incarceration, arrests, self-reported mental and physical health emergencies, and substance use problems decreased. In addition, employment and reported treatment of substance use disorder increased. These findings demonstrate improvements for adult partners in the first year of FSP enrollment for all outcomes.

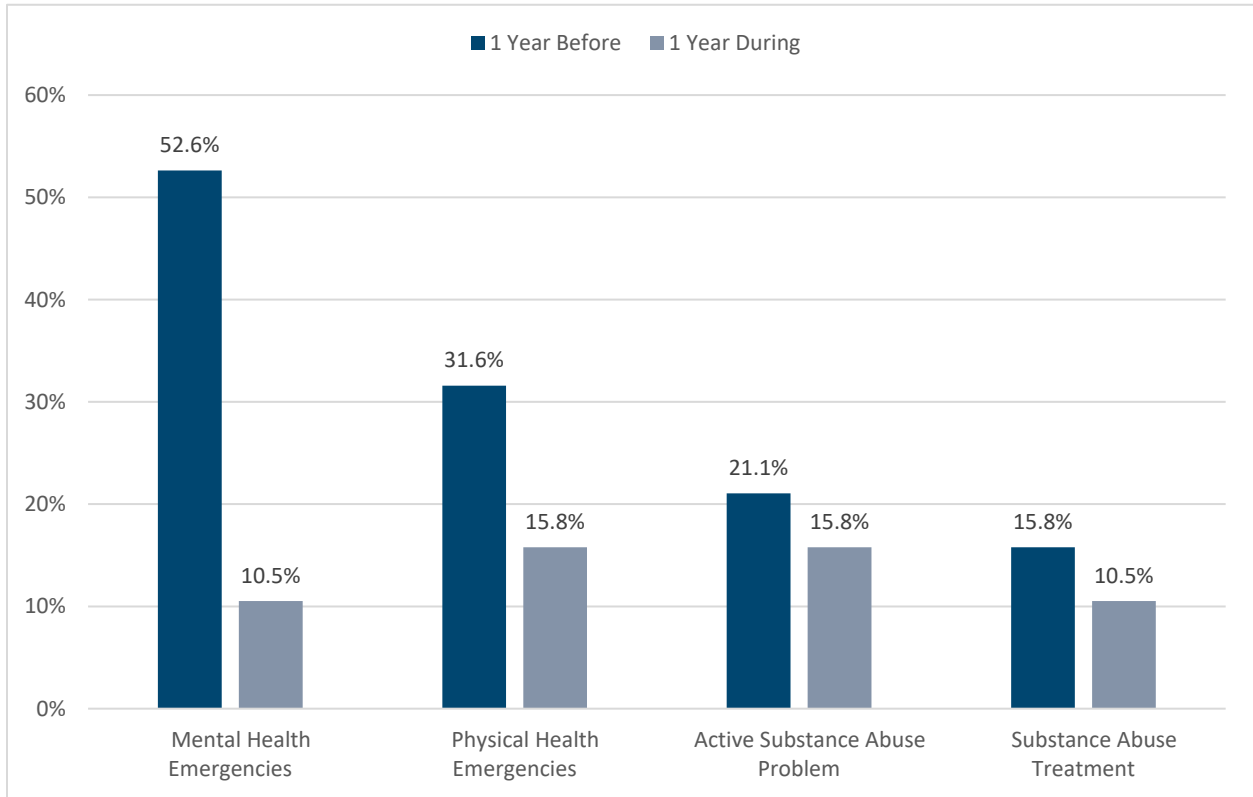
Exhibit 4. Outcomes for Adult Partners Completing One Year with FSP (n = 113)



Older Adults. Exhibit 5 compares outcomes in the year prior to FSP enrollment with outcomes reported in the first year of FSP enrollment for older adult partners. Similar to adult partners, self-reported mental and physical health emergencies, and substance use disorder all decreased. Each of these demonstrated improvement for older adult partners in the first year of FSP enrollment. Slightly fewer older adults (from 3 in the year prior to 2 in the first year of

FSP) reported treatment for substance use disorder during the first year of FSP enrollment compared to one year before. Given the small sample size, these results are inconclusive.

Exhibit 5: Outcomes for Older Adult Partners Completing One Year with FSP (n = 19)



Note: Employment, homelessness, arrests and incarceration outcomes are not presented for older adults, as there are insufficient observations in this age group for meaningful interpretation.

Children. Exhibit 6 below shows the comparison of outcomes in the year prior to FSP enrollment with the first year enrolled in an FSP program for child partners. There was a decrease in homelessness, arrests, suspensions, and mental or physical health emergencies after enrollment in a FSP program. However, detention or incarceration remained the same for children, (29 incidents in the first year with FSP and 29 in the year prior to FSP enrollment). The incidence of arrests reduced by a large magnitude after enrollment in FSP (10 in the first year with FSP compared to 62 in the year just prior).

Exhibit 6: Outcomes for Child Partners Completing One Year with FSP (n = 201)

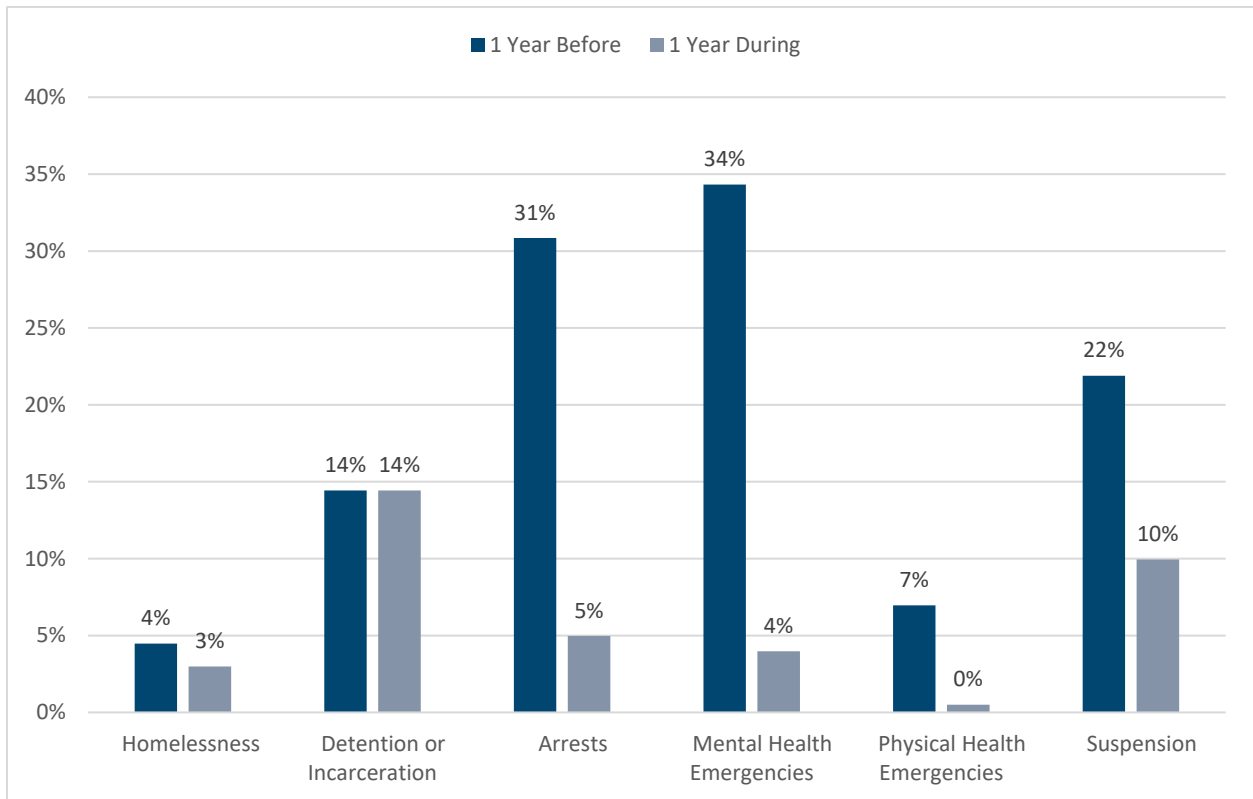
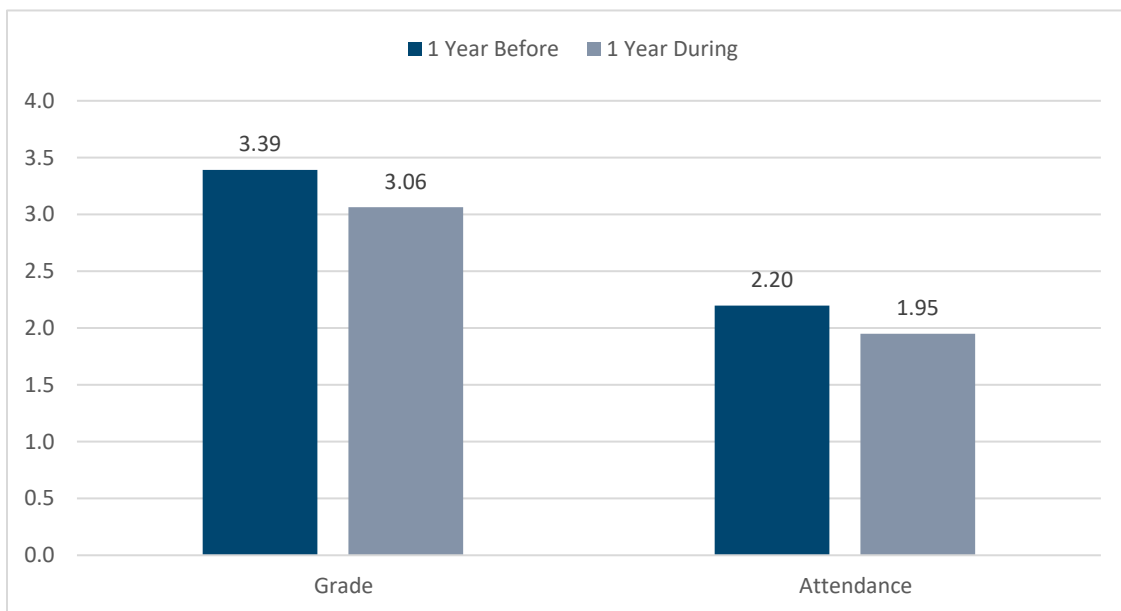


Exhibit 7 presents outcomes on school attendance and grades. School attendance and grades for child partners declined modestly. These ratings are on a 1-5 scale, coded such that a higher score is better.

Exhibit 7: School Outcomes for Child Partners Completing One Year with FSP (n = 201)



TAY. Exhibit 8 shows the comparison of outcomes in the year prior to FSP to the first year in the program for TAY partners.⁵ All self-reported outcomes decreased (an improved status), though the differences for homelessness and incarceration is small. Homelessness decreased from 33 (13.2%) in the year prior to enrollment to 32 (12.8%) in the year following enrollment. Incarceration decreased from 38 (15.2%) in the year prior to enrollment to 32 (12.8%) in the year following enrollment.

Exhibit 8: Outcomes for TAY Partners Completing One Year with FSP (n = 250)

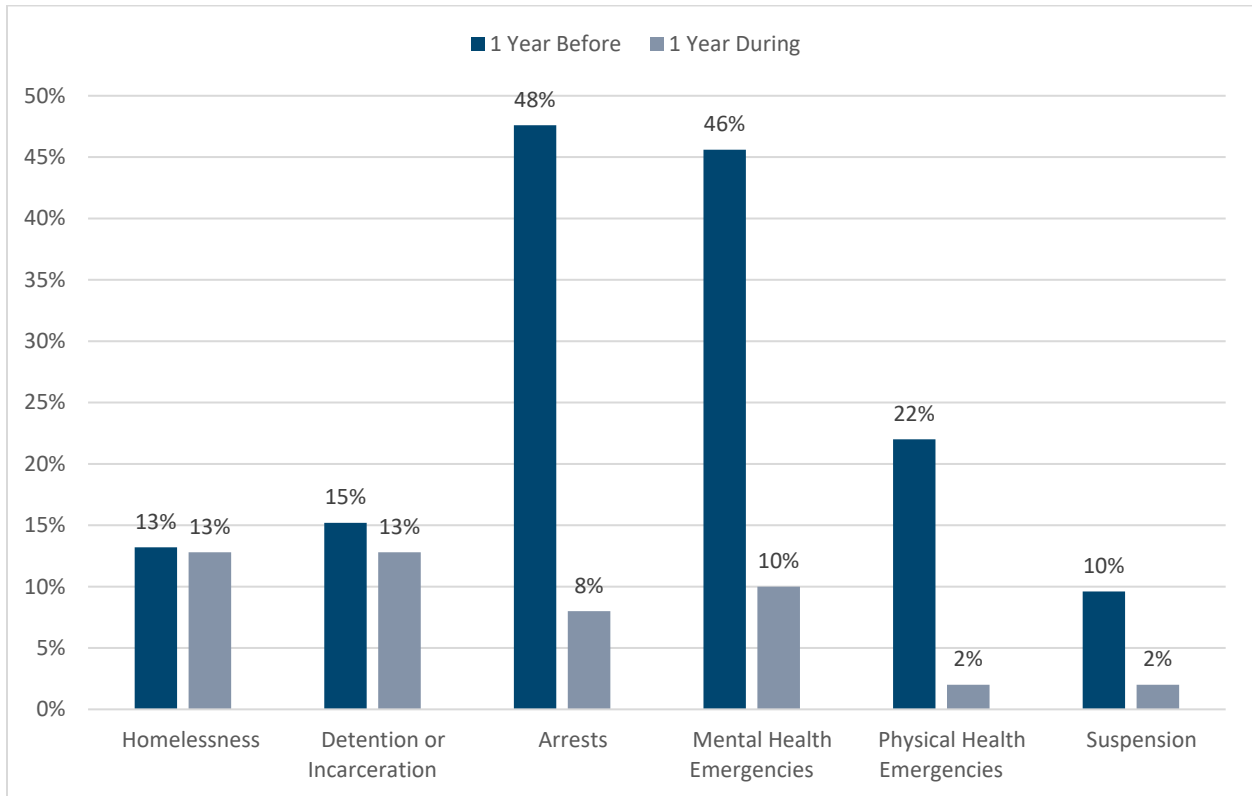
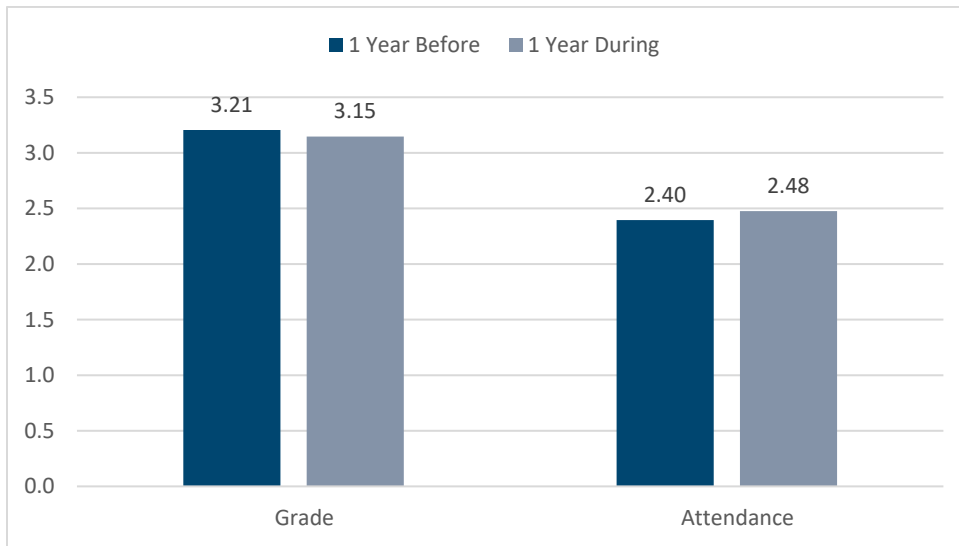


Exhibit 9 shows outcomes on school attendance and grades for TAY partners. These ratings are on a 1-5 scale; a higher score is better. There was a small decrease in grade and a slight increase in attendance after enrollment in a FSP.

⁵ The 43 older TAY partners in Caminar are excluded from these outcomes because these providers do not reliably gather TAY specific outcomes. Note that employment as an outcome is not presented for TAY because many of these individuals are in school.

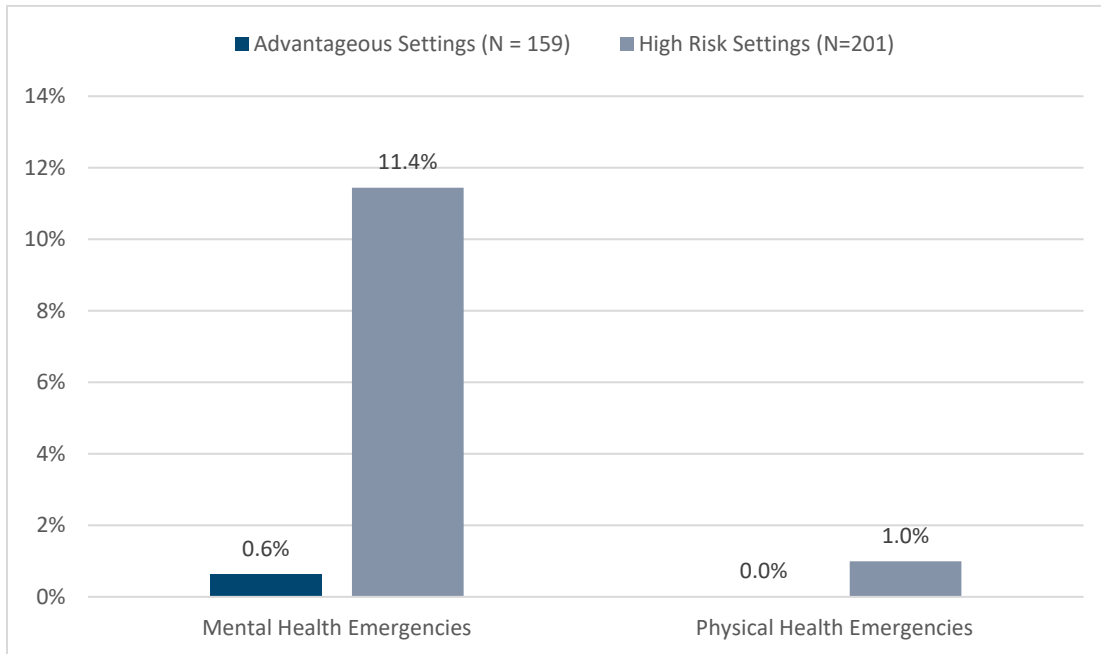
Exhibit 9: School Outcomes for TAY Partners Completing One Year with FSP (n = 250)



Mental and physical health emergencies by living situation

Exhibit 10 shows the mental and physical health emergencies in adult and older adult partners living in advantageous vs. higher risk living situations in the first year of participating in a FSP. Advantageous settings are defined as living with family or foster family, living alone and paying rent, or living in group care or assisted living. High risk settings are defined as homelessness, incarceration, or in a hospitalized setting. As shown in the exhibit, both mental and physical health emergencies were more common among individuals who experienced a high-risk residential setting in their first year of FSP participation.

Exhibit 10: Emergency Outcomes as a Function of Residential Setting

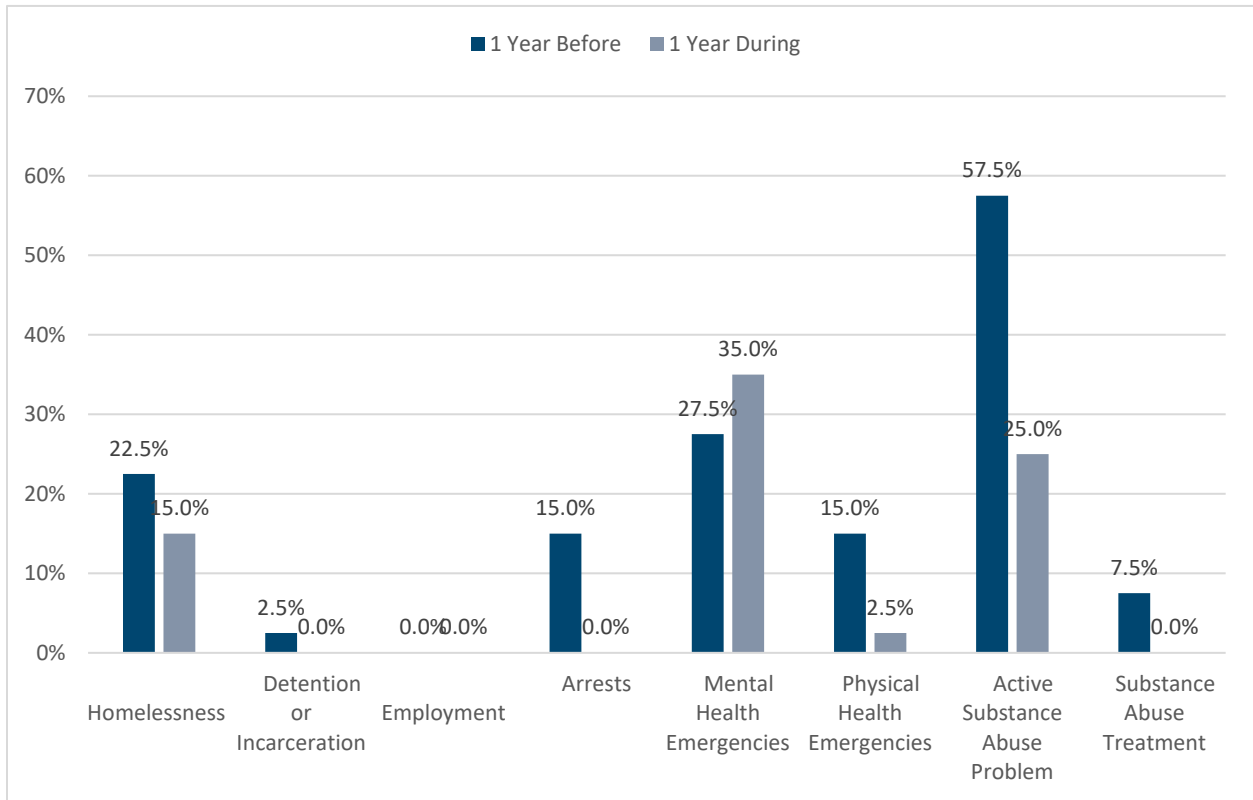


Telecare

Self-Reported Outcomes—All age groups

Telecare data only includes 40 partners who have completed at least one year of FSP as of June 30, 2021. Due to the small sample size, we have combined findings for all age groups. Exhibit 11 shows the comparison of outcomes for all Telecare partners in the year prior to FSP enrollment with the first year in an FSP. Homelessness, detention or incarceration, arrests, self-reported physical health emergencies, and substance use disorders all decreased after enrollment in FSP. Each of these outcomes demonstrates improvements for partners in the first year of FSP enrollment. Mental health emergencies were higher in Telecare partners a year after enrollment in a FSP program. In addition, fewer Telecare partners reported receiving treatment for substance use disorders one year during the FSP program compared with one year before enrollment.

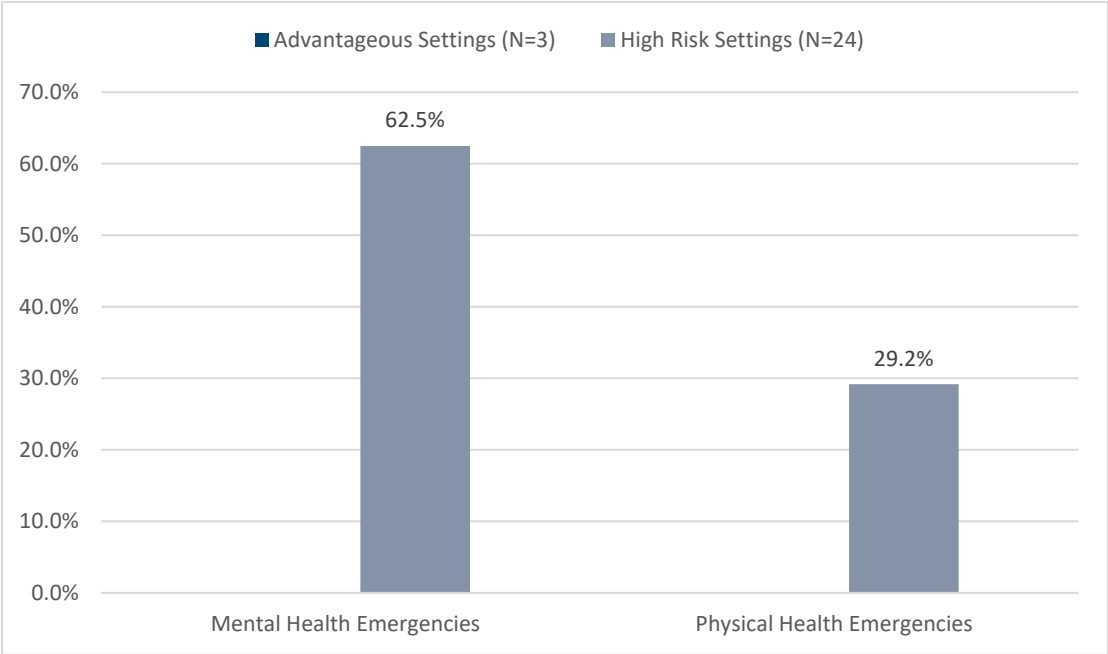
Exhibit 11: Outcomes for Telecare Partners Completing One Year with FSP (n = 40)



Mental and physical health emergencies by living situation

Exhibit 12 shows the mental and physical health emergencies in adult and older adult partners living in advantageous vs. higher risk living situations in the first year of a FSP. Mental and physical health emergencies only happened with individuals who lived in high-risk residential setting in their first year of FSP participation; there were no mental or physical health emergencies for adult and older adult partners living in advantageous situations.

Exhibit 12: Emergency Outcomes as a Function of Residential Setting among Telecare Partners



Health Care Utilization Overall and Over Time

Overview

This section describes (1) overall healthcare utilization across all partners from the beginning of the FSP program, (2) healthcare utilization by age group from the beginning of the FSP program, and (3) healthcare utilization for partners by year (2006-2021).

Four hospitalization outcomes are presented for the 211 child, 201 TAY, 342 adult, and 62 older adult FSP partners using the Avatar system (EHR):

1. **Partners with any hospitalizations:** measured by any hospital admission in the past 12 months;
2. **Partners with any PES:** measured by any PES event in the past 12 months;
3. **Average length of hospitalization (in days):** the number of days associated with a hospital stay in the past 12 months; and,
4. **Average number of PES event:** the number of PES events in the past 12 months.

Overall Healthcare Utilization Outcomes Across all Partners

We detected statistically significant changes in outcomes from the year before FSP compared to the first year in FSP for all hospitalization outcomes (Exhibit 13). Percent of partners with any hospitalization decreased from 22% before FSP to 11% during FSP. Days in the hospital decreased from 7.46 days before FSP to 2.74 days during FSP. Percent of partners with any psychiatric emergency services (PES) decreased from 43% before FSP to 27% during FSP. The average number of PES events decreased from 1.18 events before FSP to 0.72 events during FSP.

Exhibit 13: FSP Partners Have Significantly Improved Hospitalization Outcomes (n=816)

	Percentage/Mean	95% Confidence Interval
Percent of Partners with Any Hospitalization*		
1 Year Before	22%	(19% - 24%)
Year 1 During	11%	(9% - 13%)
Mean Number of Hospital Days *		
1 Year Before	7.46	(5.95 - 8.96)
Year 1 During	2.74	(1.86 - 3.62)
Percent of Partners with any PES Event*		
1 Year Before	43%	(39% - 46%)
Year 1 During	27%	(24% - 31%)
Mean PES Events, per Partner*		
1 Year Before	1.18	(1.02 - 1.34)
Year 1 During	0.72	(0.59 - 0.84)

Note. *Significance testing was conducted using Chi-square tests for percentages and t-tests for means; results are statistically significant at the 5% level.

Health Care Utilization for FSP Partners by Age Group

Hospitalization outcomes are presented in Exhibits 14-17, respectively by age group. For all four age groups, the percent of FSP partners with any hospitalization or PES event decreased after joining FSP. The mean number of hospital days experienced by FSP partners and average number of PES events also decreased after FSP enrollment for all age groups.

Exhibit 14: Hospitalization and PES Outcomes for Adult Partners Completing One Year with FSP (n = 342)

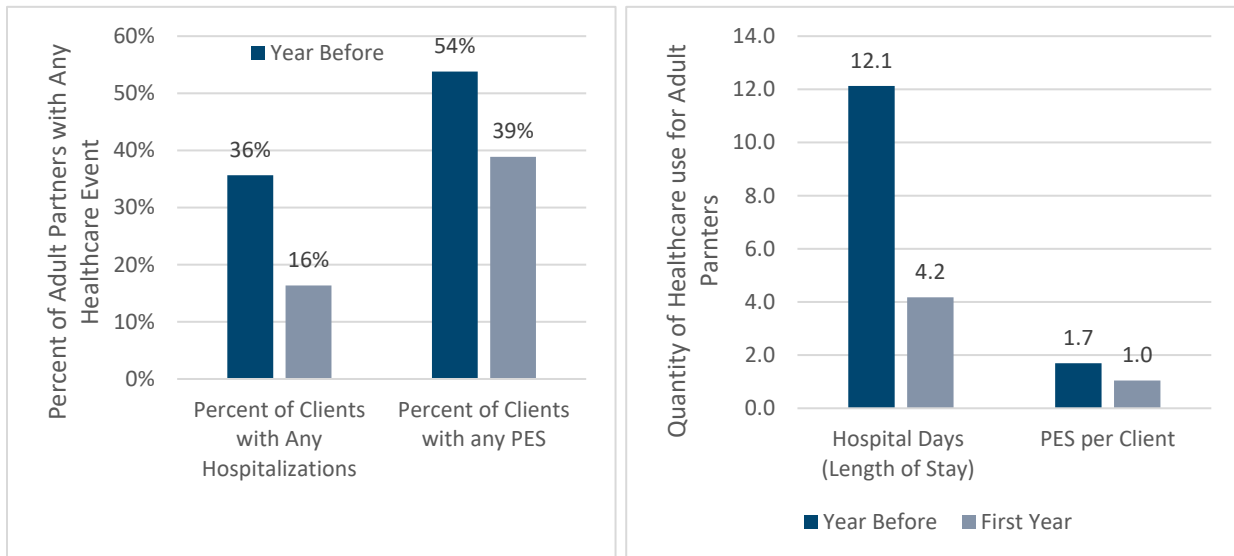


Exhibit 15: Hospitalization and PES Outcomes for Older Adult Partners Completing One Year with FSP (n = 62)

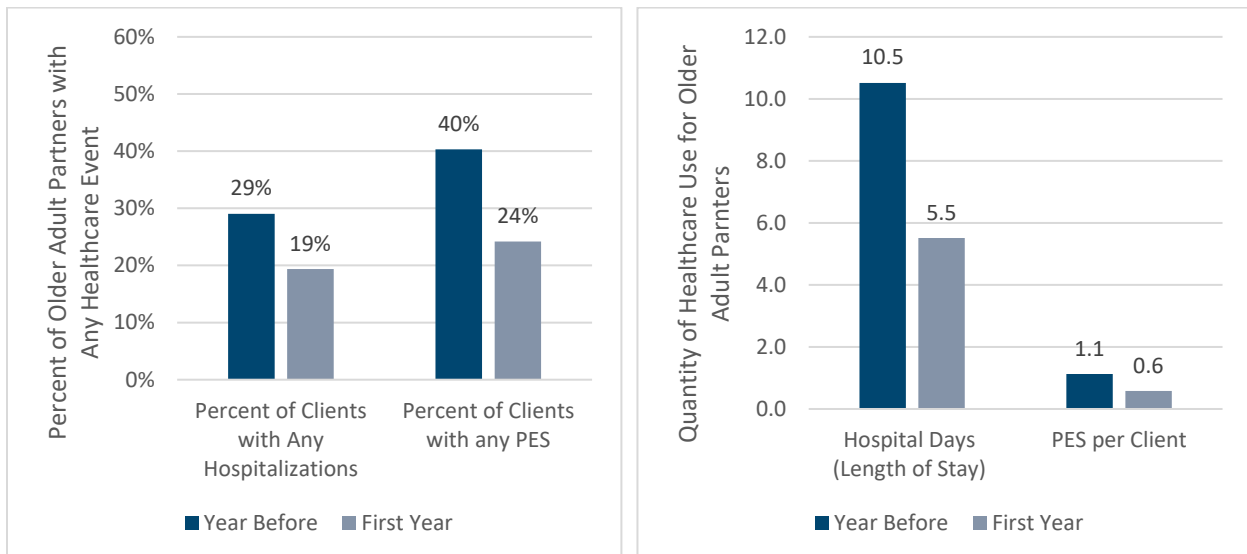


Exhibit 16: Hospitalization and PES Outcomes for Child Partners Completing One Year with FSP (n = 211)

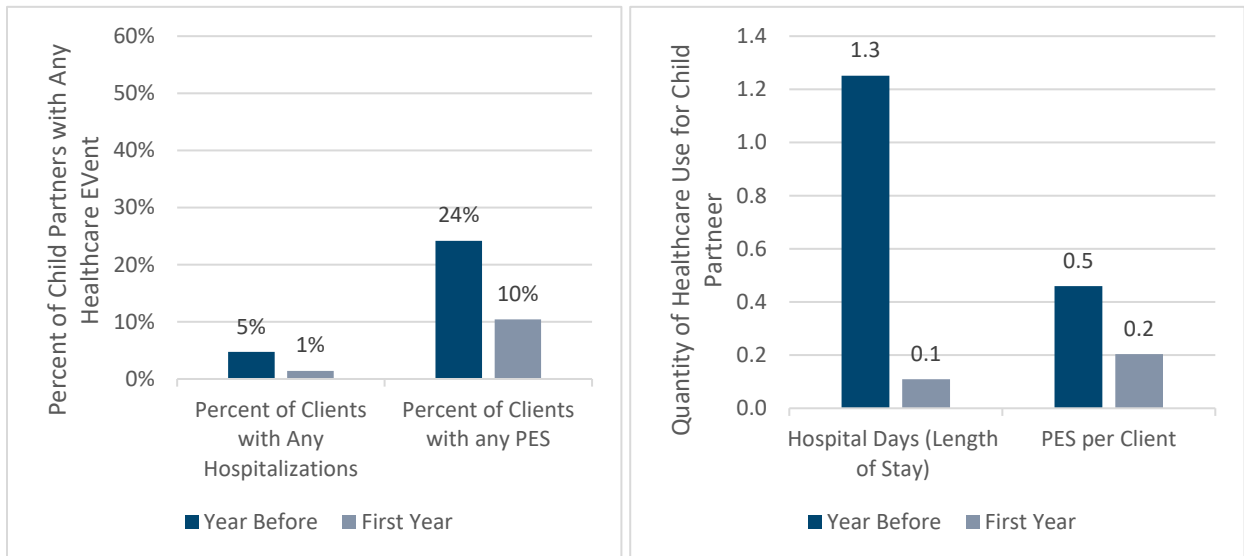
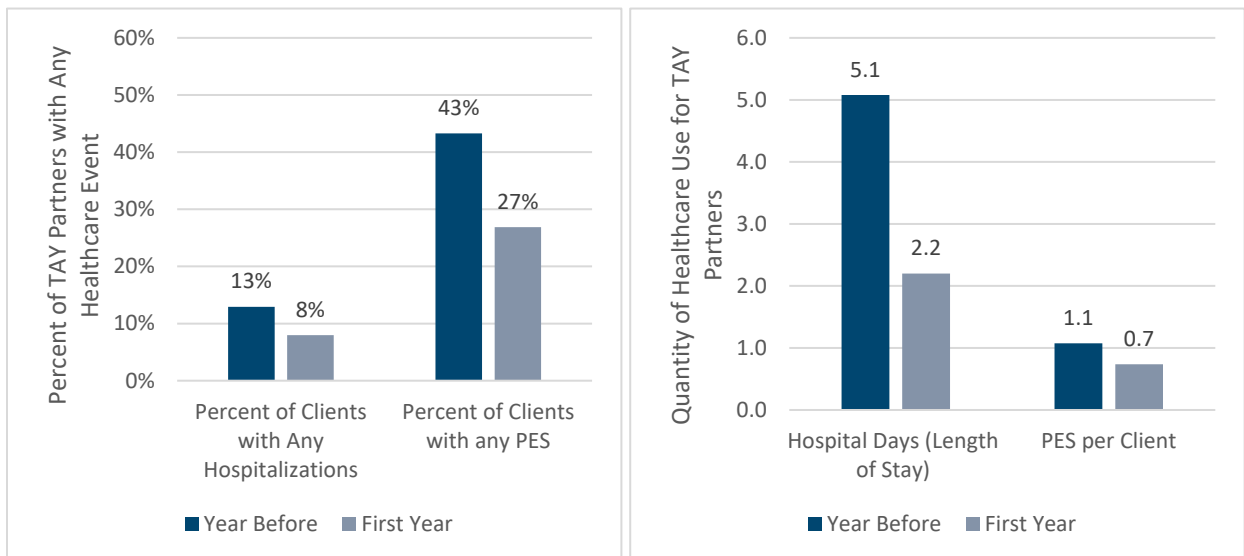


Exhibit 17: Hospitalization and PES Outcomes for TAY Partners Completing One Year with FSP (n = 201)



Health Care Utilization for FSP Partners over Time

Exhibits 18-21 show the four healthcare utilization outcomes, including the percent of partners with any hospitalization, mean hospital days per partner, percent of partners using any psychiatric emergency services (PES), and mean PES event per partner, stratified by enrollment year. As can be seen in Exhibit 18, the percent of partners with any hospitalization decreased after joining an FSP program for all enrollment year cohorts.

Exhibit 18: Percent of Partners with Any Hospitalization by FSP enrollment year.

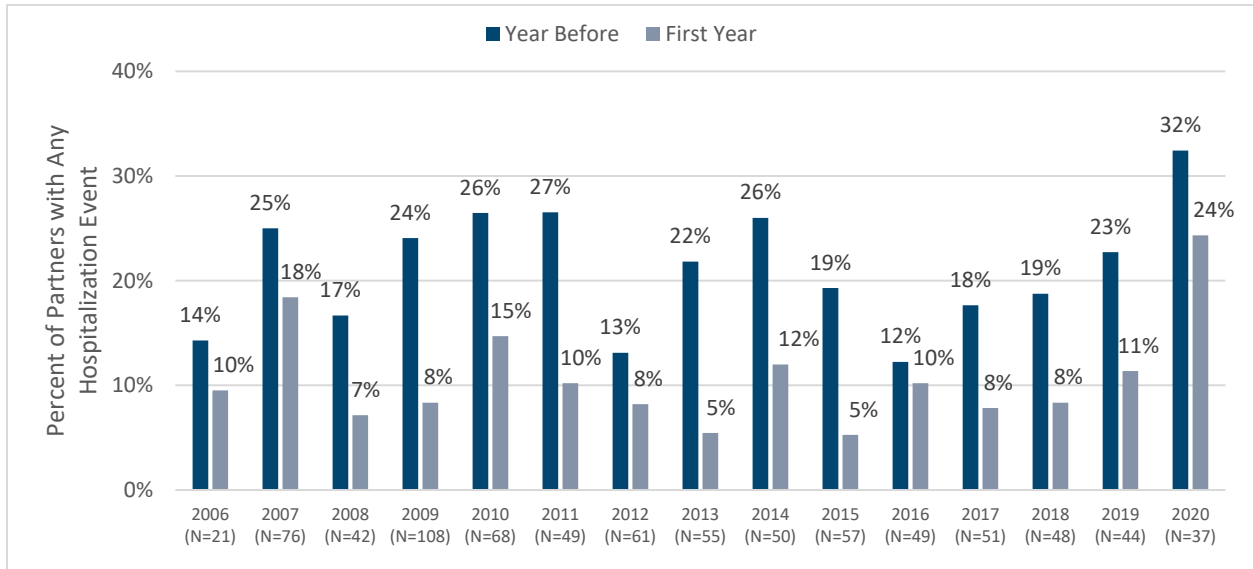


Exhibit 19 displays the mean hospital days per partner by enrollment year. With the exception of 2006 and 2007 cohorts, most partners experienced decrease in the mean number of hospital days regardless of when they enrolled in the program.

Exhibit 19: Mean Number of Hospital Days by FSP Enrollment Year

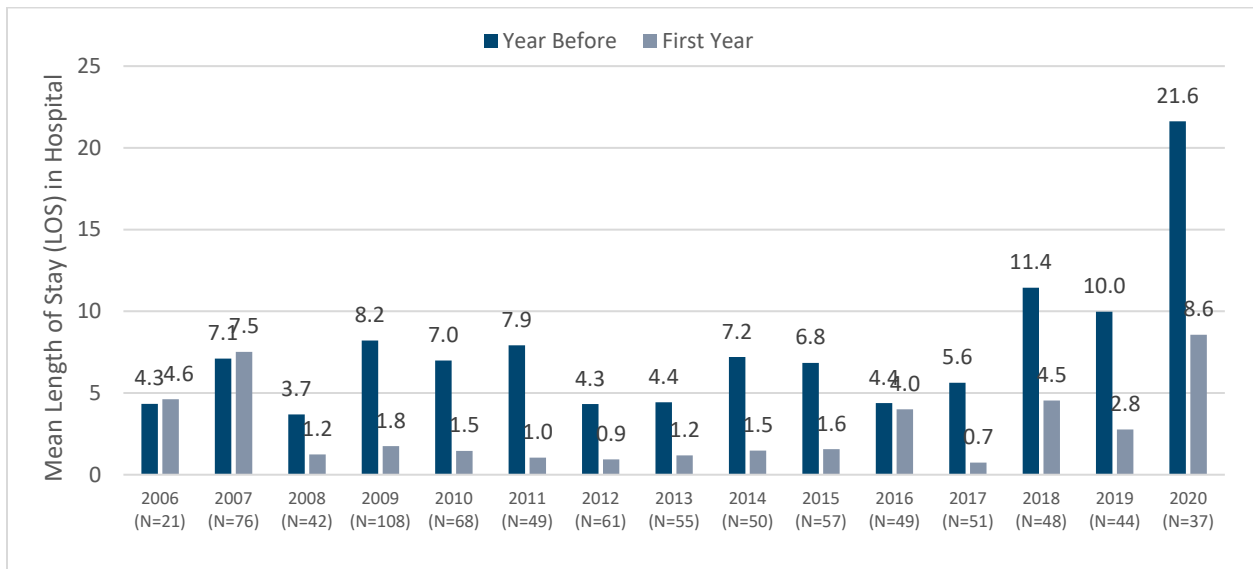


Exhibit 20 displays the percent of partners with any PES event by the year they began FSP. All cohorts experienced a decline in the likelihood of a PES event.

Exhibit 20: Percent of Partners with any PES Event by FSP Enrollment Year

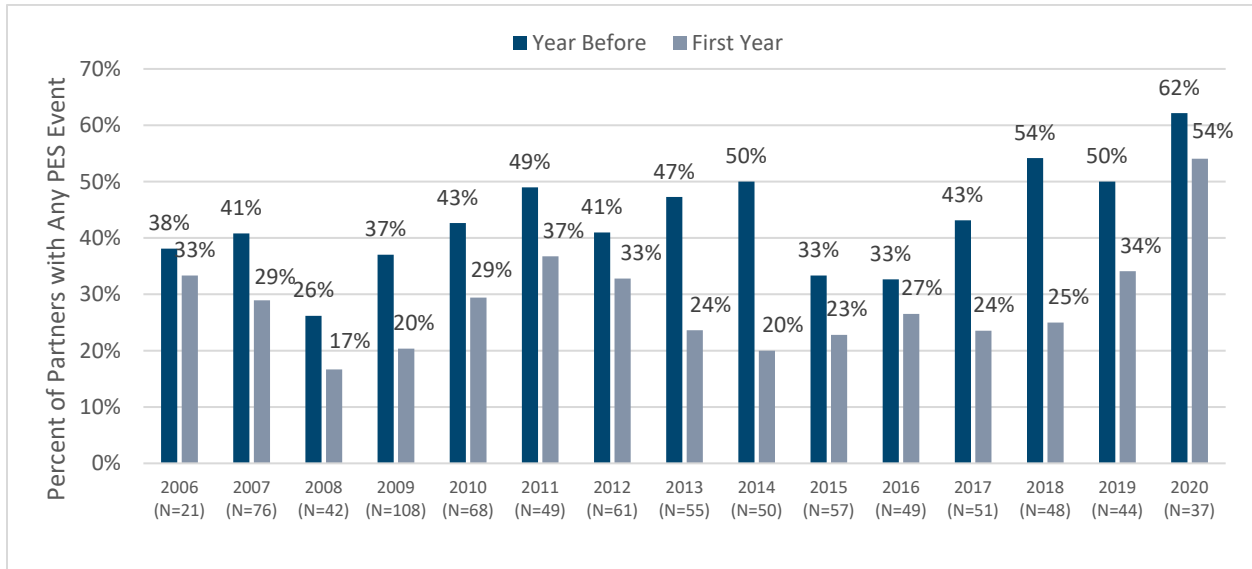
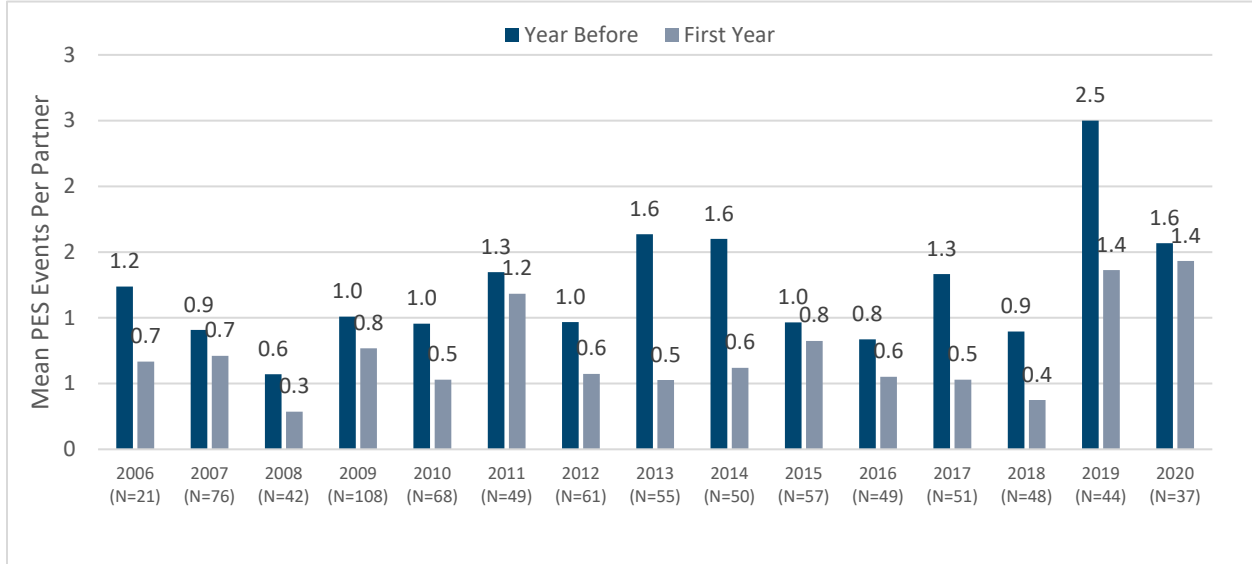


Exhibit 21 displays the mean PES events per partner by FSP enrollment year. All cohorts experienced a reduction in PES events.

Exhibit 21: Mean PES Events by FSP Enrollment Year



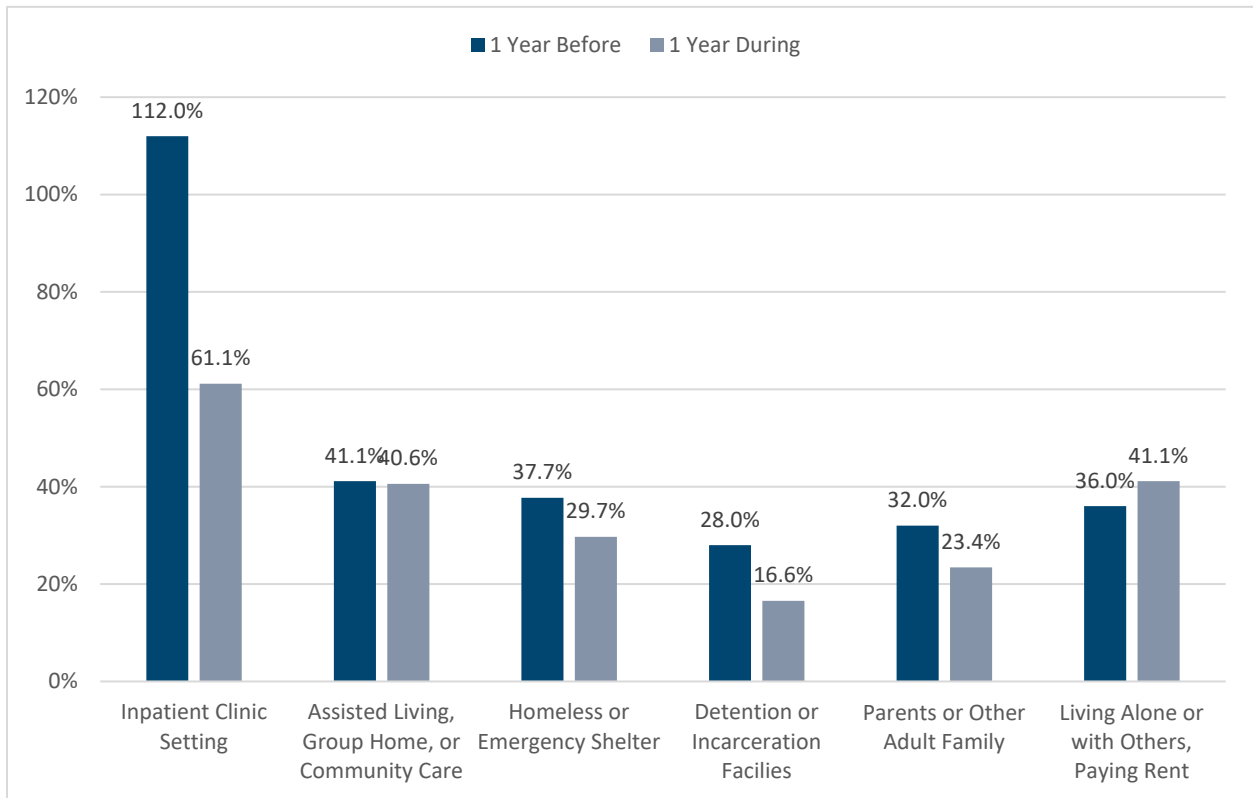
Appendix A: Additional Detail on Residential Outcomes

For residential setting outcomes, by FSP provider, we present all the categories of living situations and compare the percentages of any partners spending any time in various residential settings the year prior to FSP and in the first year of FSP participation. In the County there are currently four comprehensive FSP providers: Edgewood Center and Fred Finch Youth Center (hereafter, Edgewood/Fred Finch)⁶ serving children, youth, and transition age youth; and Caminar and Telecare serving adults and older adults. A list of all residential settings and how they are categorized, is presented in Appendix C with the methodological approach.

As can be seen in Exhibit A1, A2, and A3, the percent of clients reporting any time in an inpatient clinic, homeless, incarcerated, or living with parents decreased. In contrast, for the percent of clients who reported any time living alone or with others, paying rent increased or remained the same. Inconsistency across providers is observed for clients reporting any time in assisted living, group home or community care environment, where the percent of Caminar and Edgewood/Fred Finch partners decreased and the percent of Telecare partners slightly increased.

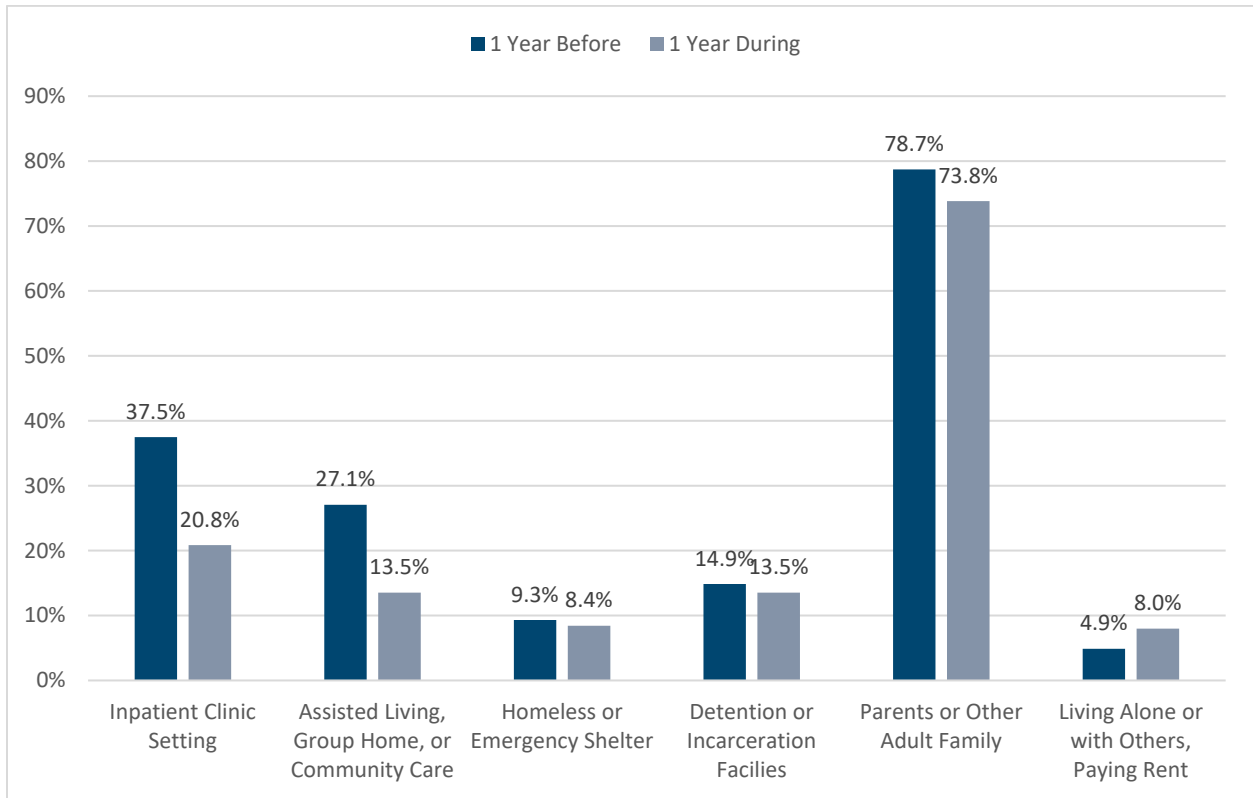
⁶ The self-reported data from Edgewood Center and Fred Finch Youth Center is combined into one dataset, therefore, we refer to both centers as Edgewood/Fred Finch in this report to be consistent with the data.

Exhibit A1: Percentage of Caminar Partners Completing 1 year in the FSP Program Who Lived in A Residential Settings for Any Time During the Study Period (n = 175)



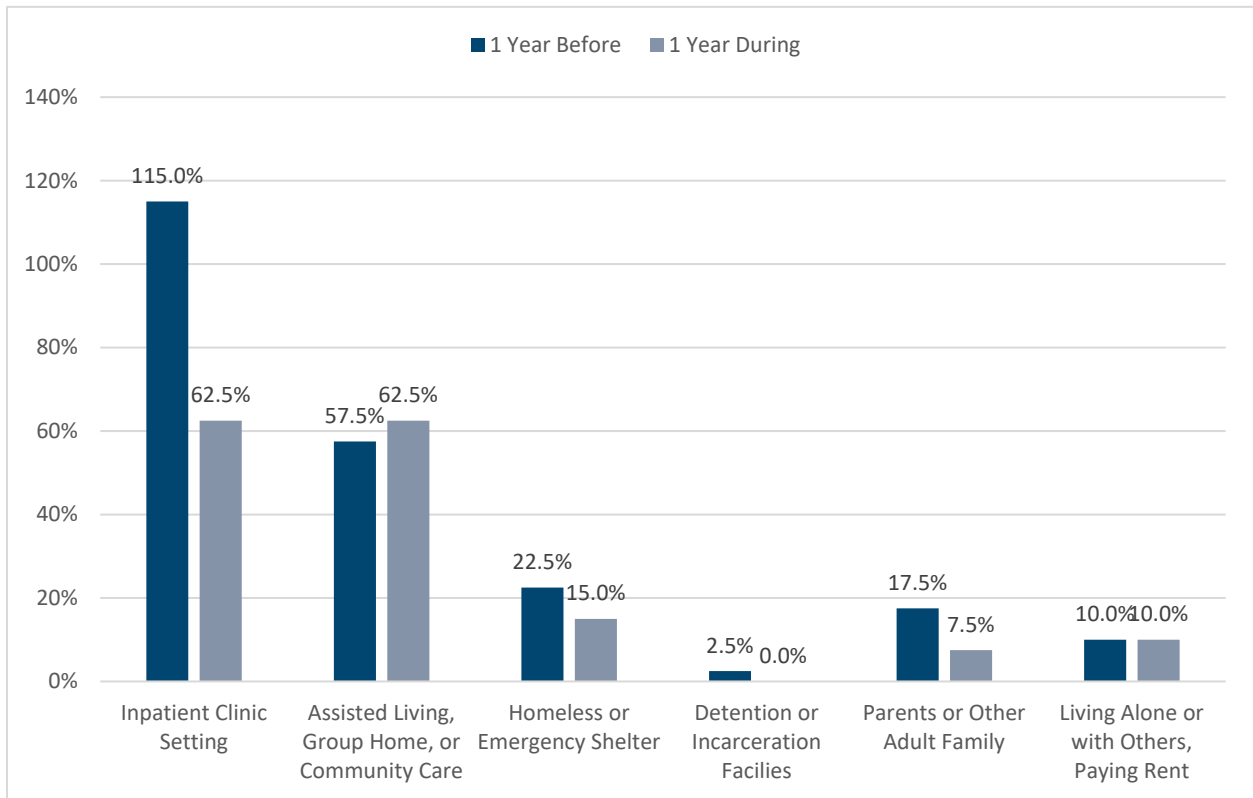
Note. Residential settings are not mutually exclusive, so percents may exceed 100.

Exhibit A2: Percentage of Edgewood/Fred Finch Partners Completing 1 year in the FSP Program Who Lived in A Residential Settings for Any Time During the Study Period (n = 451)



Note. Residential settings are not mutually exclusive, so percents may exceed 100.

Exhibit A3: Percentage of Telecare Partners Completing 1 year in the FSP Program Who Lived in A Residential Settings for Any Time During the Study Period (n = 40)



Note. Residential settings are not mutually exclusive, so percents may exceed 100.

Appendix B: Additional Detail on Outcomes by FSP Providers

This section provides more detail on the results presented in the main report. No outcomes are presented for any group of partners with 10 or fewer individuals.

Exhibit B1-B3 presents the percent of partners with any events the year just prior to FSP enrollment and the first year in an FSP, as well as the percent improvement for each FSP provider. Percent improvement is the change in percent of partners who experienced the named event in the first year of FSP participation relative to the percent of partners experiencing the event in the year prior to participating in FSP.

As can be seen in Exhibit B1, there are improvements comparing the year prior to FSP to the first year during FSP for Caminar on all the available self-reported outcomes.

Exhibit B1. Percent of Caminar Partners with Outcome Events by Year and Percent Change in Prevalence of Outcome Events (Year before FSP vs. the first year of FSP participation) (n=175)

Survey Outcomes, Caminar	1 Year Before	Year 1 During	Change (%)
Homelessness	37.7%	29.7%	-21.2%
Detention or Incarceration	28.0%	16.6%	-40.8%
Arrests	22.9%	3.4%	-85.0%
Mental Health Emergencies	72.0%	28.0%	-61.1%
Physical Health Emergencies	38.3%	12.0%	-68.7%
Employment	0.0%	1.7%	N/A
Active Substance Use Disorder	49.7%	44.6%	-10.3%
Substance Use Disorder Treatment	21.1%	24.6%	16.2%

As can be seen in Exhibit B2, there are improvements comparing the year prior to FSP to the first year during FSP for Telecare on most available self-reported outcomes, except for mental health emergencies, employment, and substance use disorder treatment. The percent difference with employment is reported as N/A because the percent of partners with employment did not change (from 0% to 0%). Thus, the denominator is 0.

Exhibit B2. Percent of Telecare Partners with Outcome Events by Year and Percent Change in Prevalence of Outcome Events (Year before FSP vs. the first year of FSP participation) (n=40)

Survey Outcomes, Telecare	1 Year Before	Year 1 During	Change (%)
Homelessness	22.5%	15.0%	-33.3%
Detention or Incarceration	2.5%	0.0%	-100.0%
Arrests	15.0%	0.0%	-100.0%
Mental Health Emergencies	27.5%	35.0%	27.3%
Physical Health Emergencies	15.0%	2.5%	83.3%
Employment	0.0%	0.0%	N/A
Active Substance Use Disorder	57.5%	25.0%	-56.5%
Substance Use Disorder Treatment	7.5%	0.0%	-100.0%

Note. Red (bold) font indicates outcomes that worsened, such as more frequently reported mental health emergencies.

Exhibit B3 shows improvement for Edgewood/Fred Finch partners in all outcomes except for self-rated academic grade and school attendance.

Exhibit B3. Percent of Edgewood/Fred Finch Partners with Outcome Events by Year and Percent Change in Prevalence of Outcome Events (Year before FSP vs. the first year of FSP participation) (n=451)

Survey Outcomes, Edgewood	1 Year Before	Year 1 During	Change (%)
Homelessness	9.3%	8.4%	-9.5%
Detention or Incarceration	14.9%	13.5%	-9.0%
Arrests	40.1%	6.7%	-83.4%
Mental Health Emergencies	40.6%	7.3%	-82.0%
Physical Health Emergencies	15.3%	1.3%	-91.3%
Suspension	15.1%	5.5%	-63.2%
Academic Grade	3.33	3.09	-7.2%
School Attendance	2.26	2.13	-5.9%

Note. Red (bold) font indicates outcomes that worsened, such as the decline in grade ratings.

Appendix C: Methods

Methodology for FSP Survey Data Analysis

The FSP survey data are collected by providers via discussions with partners and should thus be viewed as self-report. Among the providers included in these analyses (Edgewood/Fred Finch, Caminar, and Telecare), 666 partners completed a full year with FSP since program inception.

In general, three datasets are obtained for this report: one from Caminar, one from Telecare and one from Edgewood/Fred Finch. All providers provide their datasets in a Microsoft Excel format. In 2018, Telecare changed their data system for the FSP survey in which the data structure and variable names were different from before. Due to data reliability issues, Telecare only provided the data after their data system change—i.e., data from December 2018 onward. Therefore, the main analysis of this report includes all Caminar and Edgewood/Fred Finch partners, and a separate analysis is included for Telecare data since December 2018.

Edgewood/Fred Finch serve child partners and transitional age youth (TAY) partners. Caminar and Telecare serve primarily adult and older adult partners, and a small number of older TAY clients. Exhibit C1 below describes the age group of partners completing at least one full year of FSP from 2006 to 2021 by provider. For Telecare, this data includes December 2018 through June 2021.

Exhibit C1: Summary of Partners One Full Year of FSP

Age Group	Edgewood/ Fred Finch	Caminar	Telecare	Total*
Child (aged 16 and younger)	201	--	--	201
TAY (aged 17 – 25)	250	43	2	295
Adult (aged 26 -59)	--	113	25	138
Older Adult (aged 60+)	--	19	13	32
Total	451	175	40	666

Note. *Telecare partners in the analysis include only those who joined the FSP after December 1, 2018 due to data availability. Telecare partners were not reported in the survey outcomes by age group, a separate analysis was conducted for Telecare partners all age groups combined due to small sample size.

A master assessment file with FSP start and end dates and length of FSP tenure was created at the client level. Note that for clients who stopped and then reestablished their FSPs, we only kept the record corresponding with their most recent participation in an FSP (using Global ID), as indicated in the State’s documentation.

Partner type (child, TAY, adult, and older adult) is determined by the Partnership Assessment Form (PAF) data.

- For Caminar and Edgewood/Fred Finch, this was done by selecting records with specific Age Group codes, i.e.:
 - Caminar: selected records with Age Group codes of “7” (TAY partner, aged 17 to 25), “4” (adult partner, aged 25 to 59), and “10” (older adult partner, aged 60 and older).
 - Edgewood/Fred Finch: selected records with Age Group codes of “1” (child partner, aged 16 and younger) and “4” (TAY partner, aged 17 to 25).
 - In both cases, this was confirmed using the data file’s continuous *Age* variable.
- For Telecare data, partners were given an age appropriate PAF. Records with specific *Form Type* codes were retained in the analysis (i.e., Form Types “TAY_PAF”. “Adult_PAF” and “OA_PAF”).

Partnership date and *end date* were determined as follows: Partnership date was determined using enrollment start date. End date was determined by the reported date of the partnership status change in the Key Event Tracking (KET) form to “discontinued.” For clients still enrolled at the time of data acquisition, we assigned an end date of June 30, 2021.

All data management and analysis was conducted in Stata. All code is available upon request. Additional details on the methodology for each outcome are presented below.

Residential Setting

1. Residential settings were grouped into categories as described in the table below (Exhibit C2).
2. The baseline data were populated using the variable *PastTwelveDays* (Caminar and Edgewood/Fred Finch) or *res_past12m_days_int* (Telecare) collected by the PAF. Individuals without any reported locations were assigned to the “Don’t Know” category.
3. The partner’s first residential status once they joined FSP is determined by the *Current* (Caminar and Edgewood/Fred Finch) or *res_curr_dsr* (Telecare), collected by the PAF. Individuals without any reported current residence were assigned to the “Don’t Know” category. Some individuals had more than one first residence location. In this case, if there was one residence with a later date (as indicated by the variable, *DateResidentialChange* (Caminar and Edgewood/Fred Finch) or *main_resident_date* (Telecare)), this residence was considered to be the first residential setting. If the residences were marked with the same date, both were considered as part of the partner’s first year in an FSP.

4. Additional residential settings for the first year were found using the KET data, inclusive of all residence types listed with a corresponding date of residential change (*DateResidentialChange* (Caminar and Edgewood/Fred Finch) or *main_resident_date* (Telecare)) occurring within one year of the FSP partnership start date. If no residential data were captured subsequent to the PAF by a KET, it was assumed that the individual remained in their original residential setting.

Exhibit C2: Residential Setting Categories and Corresponding Classification Values used to Derive Them

Category	Telecare, Caminar, Edgewood/Fred FinchSetting Value ⁷
With family or parents	
With parents	1
With other family	2
Alone	
Apartment alone or with spouse	3
Single occupancy (must hold lease)	19
Foster home	
Foster home with relative	4
Foster home with non-relative	5
Homeless or Emergency Shelter	
Emergency shelter	6
Homeless	7
Assisted living, group home, or community care	
Individual placement	20
Assisted living facility	28
Congregate placement	21
Community care	22
Group home (Level 0-11)	11
Group home (Level 12-14)	12
Community treatment	13
Residential treatment	14
Inpatient Facility	
Acute medical	8
Psychiatric hospital (other than state)	9
Psychiatric hospital (state)	10
Nursing facility, physical	23
Nursing facility, psychiatric	24
Long-term care	25
Incarcerated	
Juvenile Hall	15
Division of Juvenile Justice	16
Jail	27
Prison	26
Other / Don't Know	
Don't know	18
Other	17

Employment

Employment outcomes were generated for adults only. Therefore, Edgewood/Fred Finch data were excluded.

1. The baseline data were populated using the PAF data. An individual was considered as having had any employment if there was a non-zero, non-blank value for one of the following variables (note that variable names differ slightly by dataset):
 - a. Any competitive employment in past twelve months (any competitive employment; any competitive employment for any average number of hours per week; any average wage for competitive employment)
 - b. Any other employment in past twelve months (any other employment; any other employment for any average number of hours per week; any average wage for any other employment)
2. Ongoing employment was populated using any dates of employment change (variable names vary slightly by file) noted in the KET file within the first year of membership in FSP (as determined by the partnership start date). An employment change was coded if the new employment status code corresponding to the employment change date indicated competitive employment or other employment. If the KET contained no information on employment, the original employment was presumed to sustain throughout FSP membership.

Arrests

1. The baseline arrest data were populated using the variable *ArrestsPast12* (Caminar and Edgewood/Fred Finch) or *lgl_arrest_p12_times* (Telecare) collected by the PAF. If the variable was blank, the partner was assumed to have zero arrests in the year prior to FSP.
2. Ongoing arrests were populated using any dates of arrest (variable names vary slightly by file) noted in the KET file within the first year of membership in FSP (as determined by the partnership date). If the KET contained no information on arrests, the partner was assumed to have had no arrests in the first year in an FSP.

Mental and Physical Health Emergencies

1. The baseline utilization of emergency services was populated using the PAF's variables for mental health emergencies (*MenRelated* (Caminar and Edgewood/Fred Finch) or *emr_mental_p12* (Telecare)) and physical health emergencies (*PhysRelated* (Caminar

⁷ Setting names determined by the following guide:
https://mhdatapublic.blob.core.windows.net/fsp/DCR%20Data%20Dictionary_2011-09-15.pdf

and Edgewood/Fred Finch) or *emr_physical_p12* (Telecare)), respectively. If either of these fields were blank, the partner was assumed to have had zero emergencies of that type in the year prior to FSP.

2. Ongoing emergencies were populated using the variable indicating the date of emergency (variable names vary slightly by file) in the KET file, as long as the date is within the first year with FSP as determined by the partnership date. The type of emergency was indicated by *EmergencyType* (Caminar and Edgewood/Fred Finch) or *main_emergency_int_dsr* (Telecare) (“1”=physical; “2”=mental). We assumed that no information on emergencies in the KET indicated that no emergencies had occurred in the first year on FSP.

Substance Use Disorder

1. Baseline data on substance use disorder were populated using variables in the PAF for active substance use disorder (*ActiveProblem* (Caminar and Edgewood/Fred Finch) or *sub_co_mh_sa_probl_past* (Telecare)) and participation in substance use disorder treatment and recovery services (*AbuseServices* (Caminar and Edgewood/Fred Finch) or *sub_sa_services_now* (Telecare)). If these fields were blank, the partner was assumed to have had no substance use disorder nor received substance use disorder treatment and recovery services in the year prior to FSP.
2. Ongoing substance use disorder data were populated using the 3M data variables of the same name. Any record of an active substance use disorder or participation a substance use disorder treatment during the first year of FSP was recorded. If there were no observations in the variables of interest, clients were assumed to have no ongoing substance use disorder or participation in substance use disorder treatment.

Methodology for Avatar Data Analysis

Hospitalization outcomes were derived from electronic health records (EHR) data obtained through the Avatar system. Using EHR data avoids some of the reliability shortcomings of self-reported information but presents several challenges as well. The Avatar system is limited to individuals who obtain care in the County hospital system. Hospitalizations outside of the County, or in private hospitals, are not captured. The hospitalization outcomes include 816 partners who were both (1) included in the Avatar system and (2) completed one full year or more in a FSP program by the June 2021 data acquisition date. Thus, individuals included in the EHR analysis had to have started with the FSP between July 2006 (the program’s inception) and June 2020.

All data management and analysis were conducted in Stata. Code is available upon request.

To count instances of psychiatric hospitalizations and PES admissions, we relied on the Avatar *view_episode_summary_admit* table. Exhibit C3 shows the corresponding program codes. Additionally, FSP episodes were identified through the Avatar *episode_history* table.

Exhibit C3: Program codes among clients ever in the FSP

Program code	Program value
Psychiatric Hospitalizations	
410200	ZZ410200 PENINSULA HOSPITAL INPT-MSO I/A
410205	410205 PENINSULA HOSPITAL INPATIENT
410700	410700 SMMC INPATIENT
921005	921005 NONCONTRACT INPATIENT
926605	926605 JOHN MUIR MED. CTR INPT MAN CARE
Psychiatric Emergency Services	
410702	Z410702 SMMC PES -termed 10/31/14
410703	410703 PRE CONV SMMC PES~INACTIVE
41CZ00	41CZ00 SAN MATEO MEDICAL CENTER - PES

Notes. Data represent all utilization from FSP clients for these codes, as pulled from Avatar on February 18, 2022.

Partner type (child, TAY, adult, and older adult) was determined by the partner’s age on the start date of the FSP program, as derived from the *c_date_of_birth* variable from the *view_episode_summary_admit* table and the *FSP_admit_dt* variable from the *episode_history* table.

As we have discussed in the previous year’s report, the distribution of partners by age group is different between the Avatar data and the FSP Survey data. This is likely due to the different

ways age group was determined. For the survey data, AIR determined age group by whether the partner was evaluated using the child, TAY, adult, or older adult FSP survey forms. For the Avatar data, AIR assigned individuals to an age group based upon the date they joined FSP and their reported date of birth.

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