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Full Service Partnership (FSP) Outcomes

Findings from 2019-2020 Fiscal Year

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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 an FSP promotes resilience and improves health outcomes of individuals served.

This report presents outcomes for child, transitional age youth (TAY), adult, and older adult clients (hereafter referred to as "partners") of the Full Service Partnership (FSP) program in the County using FSP program survey data and Avatar data, the County's electronic health records (EHR) system. In some cases, the EHR data will have a larger sample size than the survey data, as partners did not always complete the survey tools.

The findings from self-reported outcomes (survey data) suggest that the majority of outcomes improved (27 of 32 outcomes) for all reported age groups. Exhibit 1, below, presents the percent change between the year just prior to enrollment in an FSP and the first year enrolled in an FSP, by age group. Red (and bold) font in the Exhibit indicates percent change that was not favorable (e.g., greater number of detention or incarceration or worse grades for TAY partners; 5 out of 32 outcomes). Percent improvement is the percent change in the percent of partners with any outcomes of interest (e.g., homelessness, incarceration, employment). For example, the number of adult partners experiencing homelessness changed from 45 before FSP enrollment to 34 in the first year following FSP enrollment, a 24% improvement.

Exhibit 1 shows improvements for all age groups for the following self-reported outcomes: homelessness, arrests, mental health emergencies, and physical health emergencies. For children and TAY partners, school suspensions decreased, and the percent of TAY and adult partners with an episode of detention or incarceration decreased as well. Fewer adult and older adult partners reported an active substance use disorder in the year following FSP enrollment. Employment and substance use disorder treatment outcomes also increased for adult partners. Adult partners more frequently reported receiving substance use disorder treatment in the year following their FSP enrollment, which may indicate that the integrated care and case management services offered through FSP connected adult partners with needed care.

Five outcomes showed no improvement for specific age groups. Fewer older adult partners reported substance use disorder treatment in the year following FSP enrollment compared to the year before enrollment. TAY partners reported decreased grade ratings. Child partners reported decreased grade ratings and attendance, and increased detention or incarceration. However, the increase in incarceration is relatively small (28 in the first year with FSP compared to 26 in the year just prior) when compared to the decrease in arrests (56 in the first year with FSP compared to 10 in the year just prior) among child partners.

Moreover, the main finding from the hospitalization outcomes (EHR data) is that, compared to the year before joining an FSP, there are reductions in 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. The only exception is that the mean hospital days for older adults increase by about one day which is likely be attributed to other

medical conditions as both the hospitalization and PES incidence decrease significantly. Also, for all cohorts, the reductions are consistently observed over the years since the inception of the FSP program.

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

FSP Outcomes *Self-reported Outcomes*	**Adult (25 to 59 years) N = 111**			**Older adult (60 years & older) N = 17**		
	Yr before	*Yr after*	*change*	*Yr before*	*Yr after*	*change*
Homelessness	45	34	-24%	3	1	N/A
Detention or Incarceration	34	21	-38%	3	2	N/A
Employment	0	3	N/A	1	1	N/A
Arrests	22	4	-82%	13	0	-100%
Mental Health Emerg.	83	24	-71%	9	1	N/A
Physical Health Emerg.	48	17	-65%	6	2	N/A
Active S.U. Disorder	58	52	-10%	4	3	N/A
S.U. Treatment	26	32	23%	4	2	**N/A**
Healthcare Utilization (EHR data)	**Adult (25 to 59 years) N = 329**			**Older adult (60 years & older) N =53**		
	Yr before	*Yr after*	*change*	*Yr before*	*Yr after*	*change*
Hospitalization	120	54	-55%	12	9	-25%
Hospital Days per partner	11.9	3.8	-68%	3.6	5.2	**45%**
PES	178	125	-30%	17	11	-35%
PES Event per partner	1.8	1.0	-42%	1.0	0.5	-49%

FSP Outcomes *Self-reported Outcomes*	**Child (16 years and younger) N = 185**			**TAY (17 to 25 years) N = 230**		
	Yr before	*Yr after*	*change*	*Yr before*	*Yr after*	*change*
Homelessness	9	6	-33%	32	29	-9%
Detention or Incarceration	26	28	**8%**	36	31	-14%
Arrests	56	10	-82%	113	20	-82%
Mental Health Emerg.	72	8	-89%	103	24	-77%
Physical Health Emerg.	15	1	-93%	55	5	-91%
Suspension	42	20	-52%	22	5	-77%
Grade	3.36	3.02	**-10%**	3.23	3.14	**-3%**
Attendance	2.20	1.89	**-14%**	2.36	2.44	3%
Healthcare Utilization (EHR data)	**Child (16 years and younger) N = 213**			**TAY (17 to 25 years) N = 185**		
	Yr before	*Yr after*	*change*	*Yr before*	*Yr after*	*change*
Hospitalization (N)	10	3	-70%	27	18	-33%
Hospital Days per partner	1.2	0.1	-91%	5.6	2.5	-55%
PES (N)	53	23	-57%	83	53	-36%
PES Event per partner	0.5	0.2	-55%	1.1	0.8	-30%

Hospitalization Outcomes**	Overall Improvement	Range (Partnerships Beginning 2006 – 2018)
Healthcare Use (EHR data, N= 780)		
Partners with Hospitalizations	50%	26% – 77%
Mean Hospital Days	63%	(7%) – 87%
Partners with PES	36%	12% – 56%
Mean PES Events	41%	12% – 69%

Note. The table above indicates the percent change in the percent of partners with any events, comparing the year just prior to FSP with the first year on FSP. 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. Value of N/A means a change is not reported due to insufficient sample size (fewer than 10 observations). Red (and bold) font indicates outcomes that worsened, such as lower school attendance for TAY partners or more days spent in the hospital for older adult partners.
** 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.

This report also includes a separate analysis of the self-reported outcomes for Telecare partners. 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. There are 20 partners in the Telecare survey data who have completed at least a year of the FSP as of June 30, 2020. Due to the small sample size, our analysis combined all age groups for this separate analysis. Exhibit 2 shows improvements for Telecare partners on homelessness, arrests, mental and physical health emergencies, and active substance use disorder. The Telecare partners did not have improvements on incarceration and employment, and less frequently reported substance use disorder treatments.

Exhibit 2: Percent Change in Outcomes among Telecare partners, Year before FSP Compared with First Year with FSP

FSP Outcomes *Self-reported Outcomes*	Everyone N = 20		
	Yr before	*Yr after*	*change*
Homelessness	5	2	-60%
Detention or Incarceration	0	0	N/A
Employment	0	0	N/A
Arrests	5	0	-100%
Mental Health Emerg.	7	2	-71%
Physical Health Emerg.	4	0	-100%
Active S.U. Disorder	13	4	-69%
S.U. Treatment	4	0	**-100%**

Note. The table above indicates the percent change in the percent of partners with any events, comparing the year just prior to FSP with the first year on FSP. Red (and bold) font indicates outcomes that worsened, i.e. less frequently reported substance use disorder treatment.

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 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 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. The data used for this report are collected by providers from clients' (hereafter, "partners'") self-reports (i.e., survey data), and electronic health records obtained through the County's Avatar system (i.e., EHR data).

This year's report includes data from all FSP providers but only included Telecare data from December 2018 to June 2020. Telecare changed its electronic healthcare record (EHR) system and is having technical difficulties providing the data prior to the change of the EHR system.

Initial survey data are collected via an intake assessment, called the Partnership Assessment Form (PAF), which includes information on well-being across a variety of measures (e.g., 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.

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 2020 (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.

We have included several appendices to clarify the methods used and provide more detailed findings. Appendix A presents the self-reported outcomes from FSP survey by race and ethnicity among Caminar partners. Appendix B presents additional detail on residential outcomes. Outcomes for individual FSP providers can be found in Appendix C. Details on our methodology for both the self-reported outcomes and the EHR-based hospitalization outcomes can be found in Appendix D.

Self-reported outcomes

Overview

The following section presents outcomes for: 185 child (aged 16 and younger) FSP partners; 230 TAY (aged 17 - 25) FSP partners; 111 adult (aged 26-59) FSP partners; and, 17 older adult (aged 60 and older) FSP partners. 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, 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 less 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).[1]
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).[2]

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).

[1] Employment outcome is not applicable to child and TAY partners.

[2] 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.

2. **Average school attendance ranking**: 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 ranking**: 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 along and paying rent, or living in group care or assisted living) or "higher risk" (i.e., homeless, incarcerated, or in a hospitalized setting.

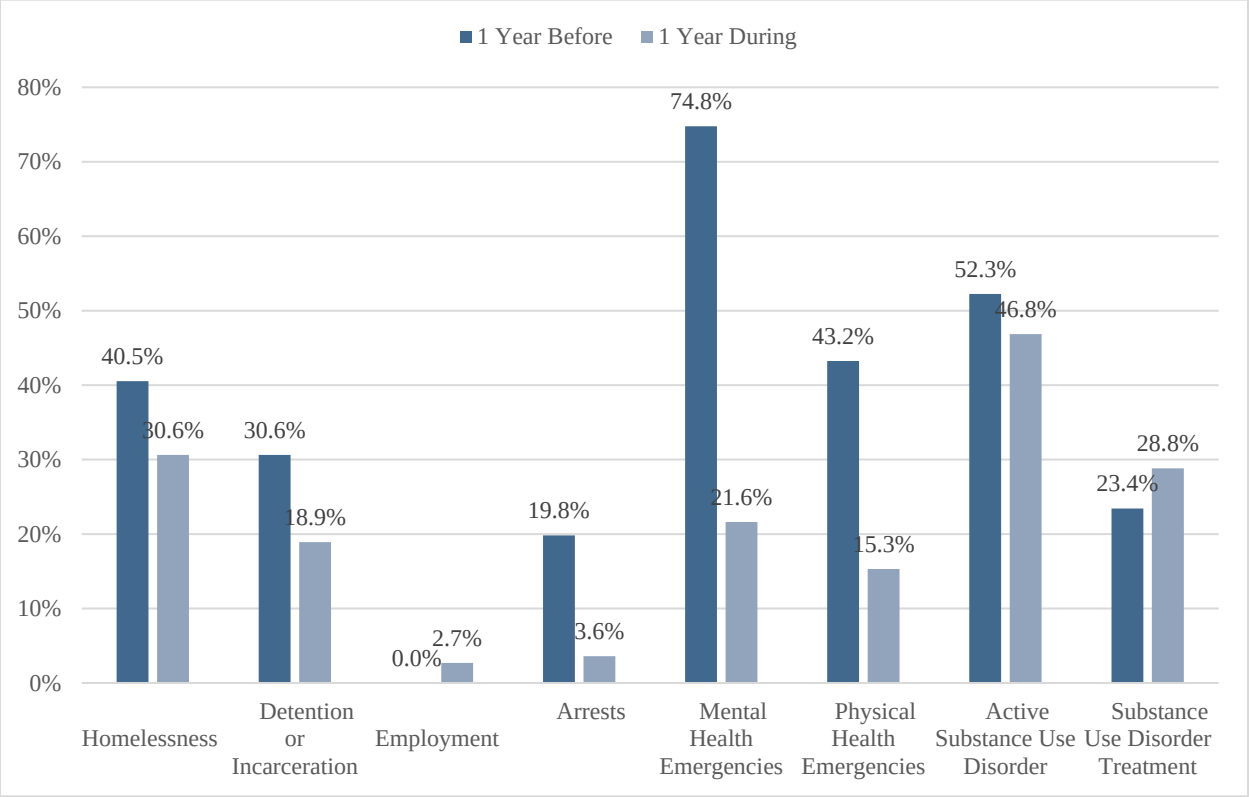
Telecare changed its electronic healthcare record (EHR) system on December 1, 2018 and was only able to provide the data after the conversion date due to data reliability issues. Our previous annual reports include all the partners from Caminar, Edgewood/Fred Finch and Telecare who joined the FSP programs since the program inception. 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 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

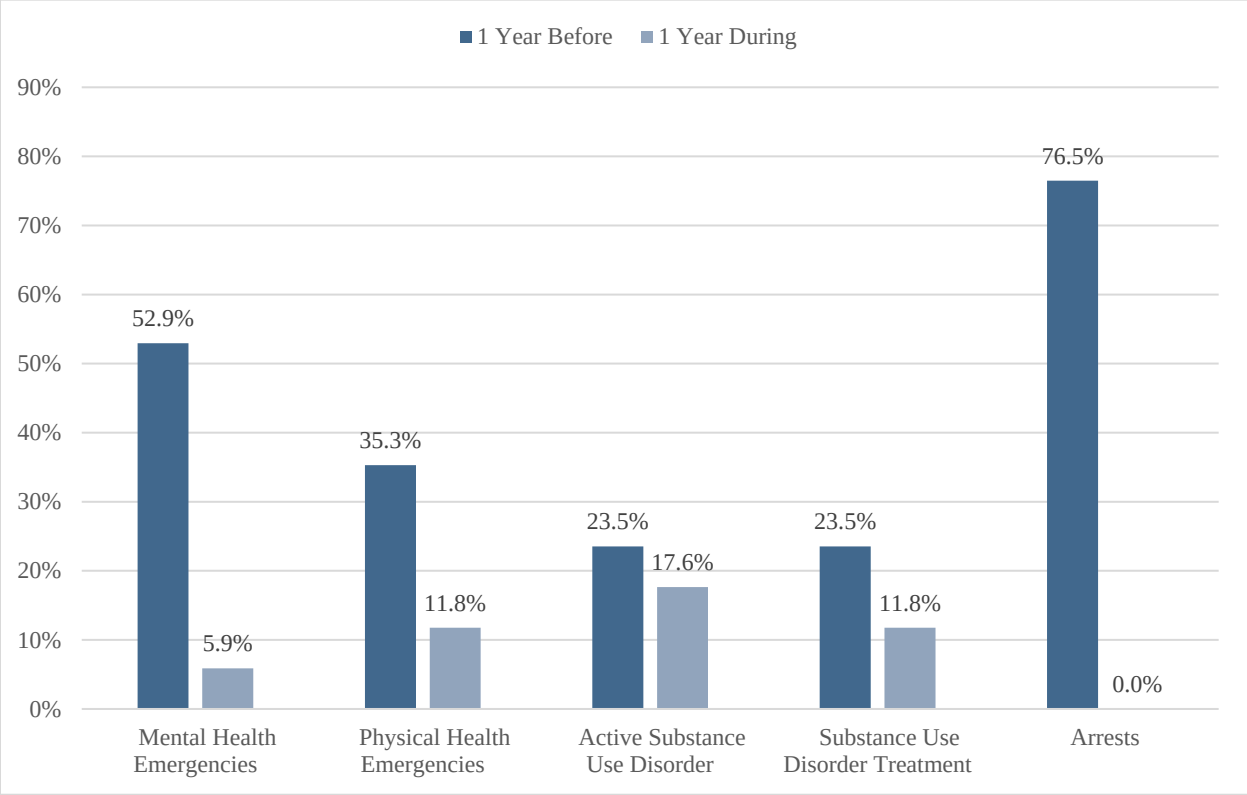
Adults. The comparison of outcomes for adult partners in the year prior to FSP enrollment with the first year in an FSP is shown in Exhibit 3. Homelessness, incarceration, arrests, self-reported mental and physical health emergencies, and substance use problems all decreased. In addition, employment and reported substance use disorder treatment increased. Each of these demonstrates improvements for adult partners in the first year of FSP enrollment.

Exhibit 3: Outcomes for Adult Partners Completing One Year with FSP (n = 111)



Older Adults. Exhibit 4 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, and arrests all decrease. Each of these demonstrates improvement for older adult partners in the first year of FSP enrollment. On the other hand, fewer older adults reported substance use disorder treatment during the first year of FSP enrollment compared to one year before.

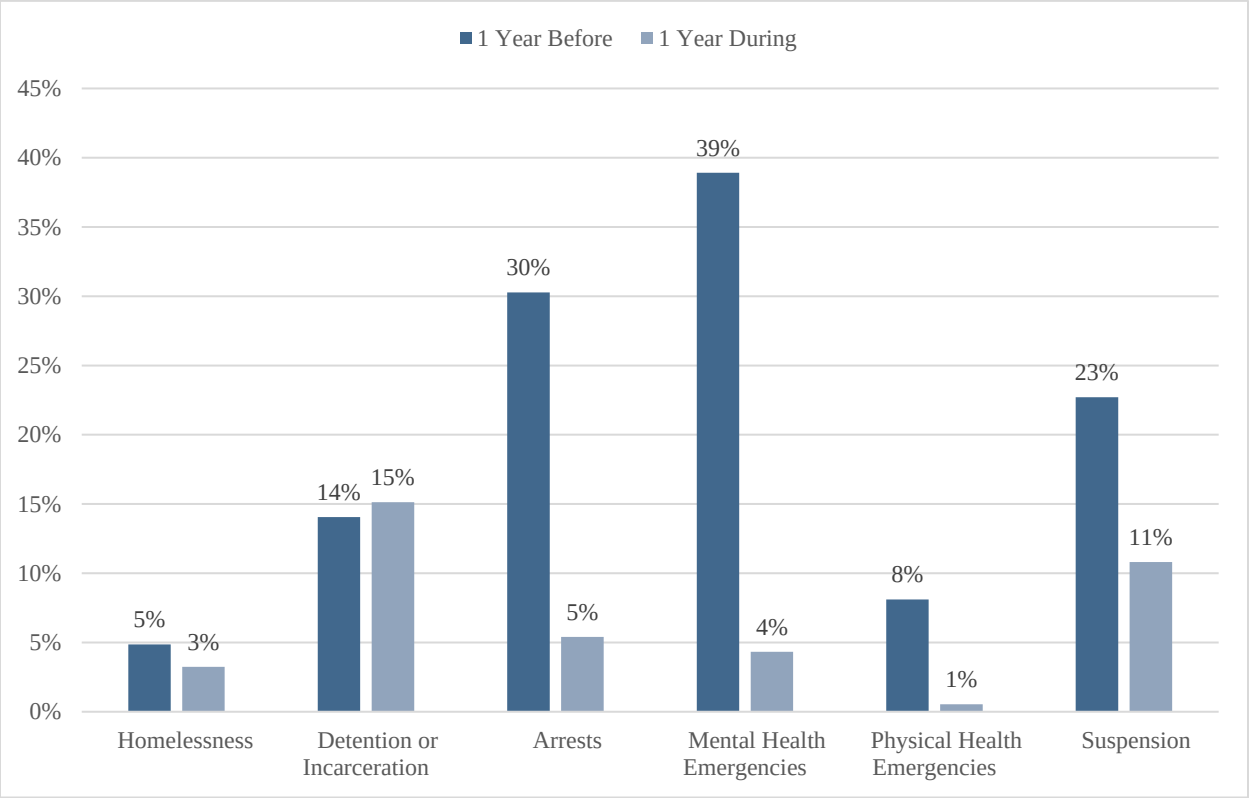
Exhibit 4: Outcomes for Older Adult Partners Completing One Year with FSP (n = 17)



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

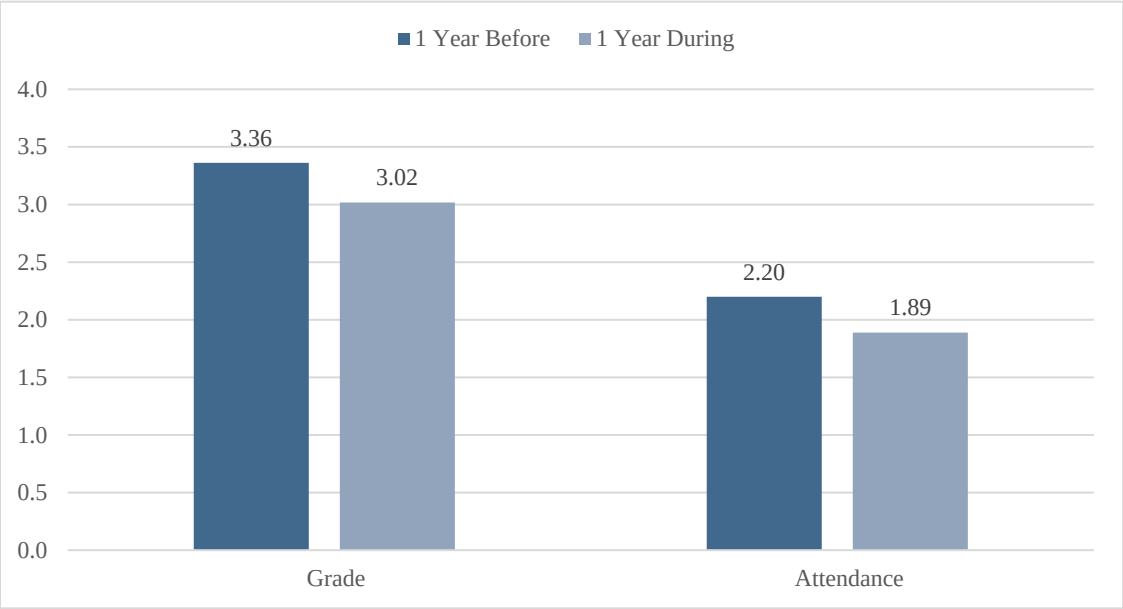
Children. Exhibit 5 below shows the comparison of outcomes in the year prior to FSP enrollment with the first year enrolled in an FSP program for child partners. The findings are essentially the same as those in the last year's report. All but one self-reported outcome decreased while participating in FSP, showing improvements in homelessness, arrests, suspensions, and mental or physical health emergencies. Detention or incarceration increased slightly for children, however (28 incidents in the first year with FSP compared to 26 incidents in the year prior to FSP enrollment). The magnitude of decline in arrest incidence is much larger (56 in the first year with FSP compared to 10 in the year just prior).

Exhibit 5: Outcomes for Child Partners Completing One Year with FSP (n = 185)



Outcomes on school attendance and grades are presented below in Exhibit 6. As can be seen, attendance and grades for child partners declined modestly. These ratings are on a 1-5 scale, coded such that a higher score is better.

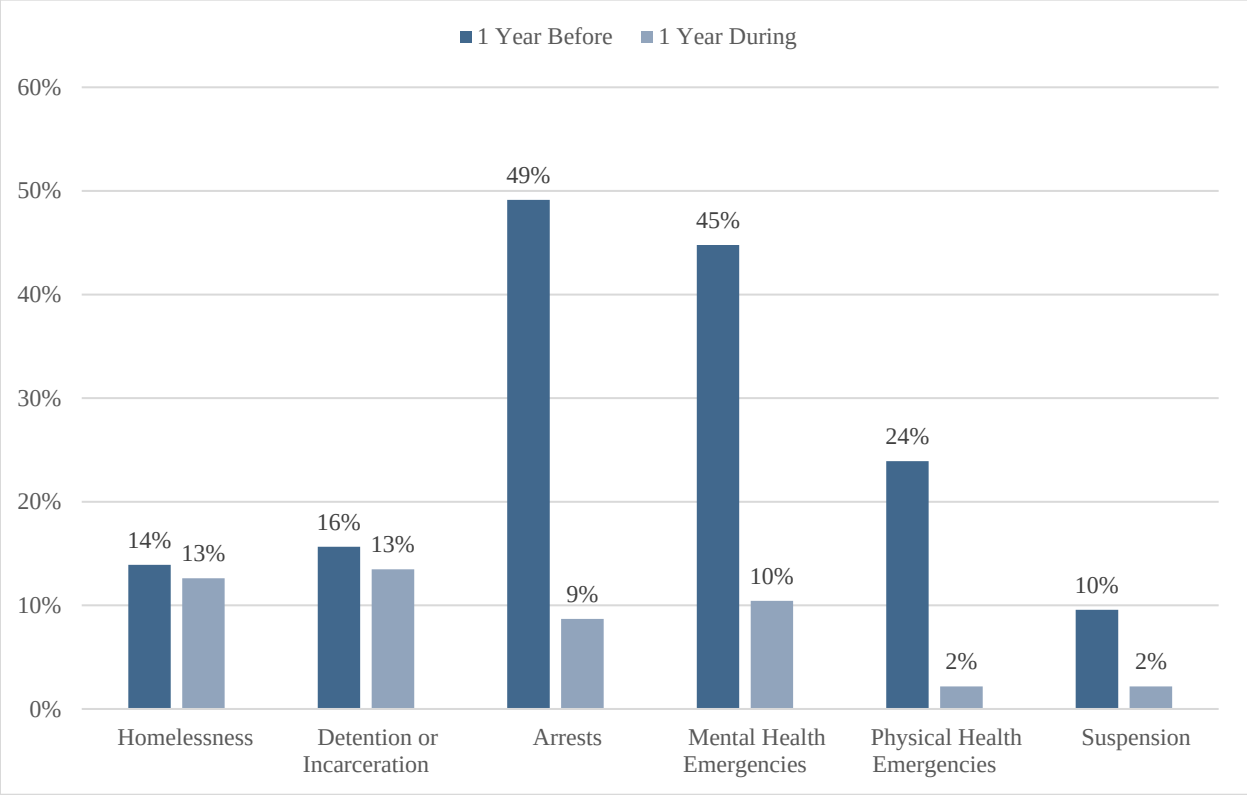
Exhibit 6: School Outcomes for Child Partners Completing One Year with FSP (n = 185)



TAY. Exhibit 7 shows the comparison of outcomes in the year prior to FSP to the first year in the program for TAY partners.[3] All self-reported outcomes decreased (an improved status), though the differences for homelessness and incarceration is small. Homelessness decreased from 32 (14%) in the year prior to enrollment to 29 (13%) in the year following enrollment. Incarceration decreased from 36 (16%) in the year prior to enrollment to 31 (13%) in the year following enrollment. Compared to the last year's report, the magnitudes of decrease are similar and slightly larger.

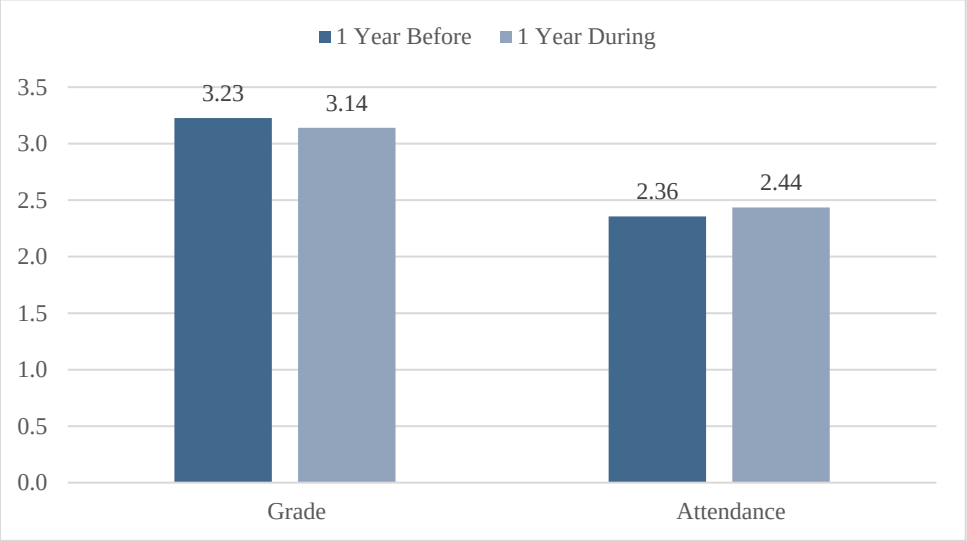
[3] The 26 older TAY partners in Caminar are excluded from these outcomes because these providers do not reliably gather TAY specific outcomes. Note that employment as an outcome is not presented for TAY because many of these individuals are in school.

Exhibit 7: Outcomes for TAY Partners Completing One Year with FSP (n = 230)



Outcomes on school attendance and grades are presented in Exhibit 8. Attendance and grades for TAY partners change very little. These ratings are on a 1-5 scale; a higher score is better.

Exhibit 8: School Outcomes for TAY Partners Completing One Year with FSP (n = 230)

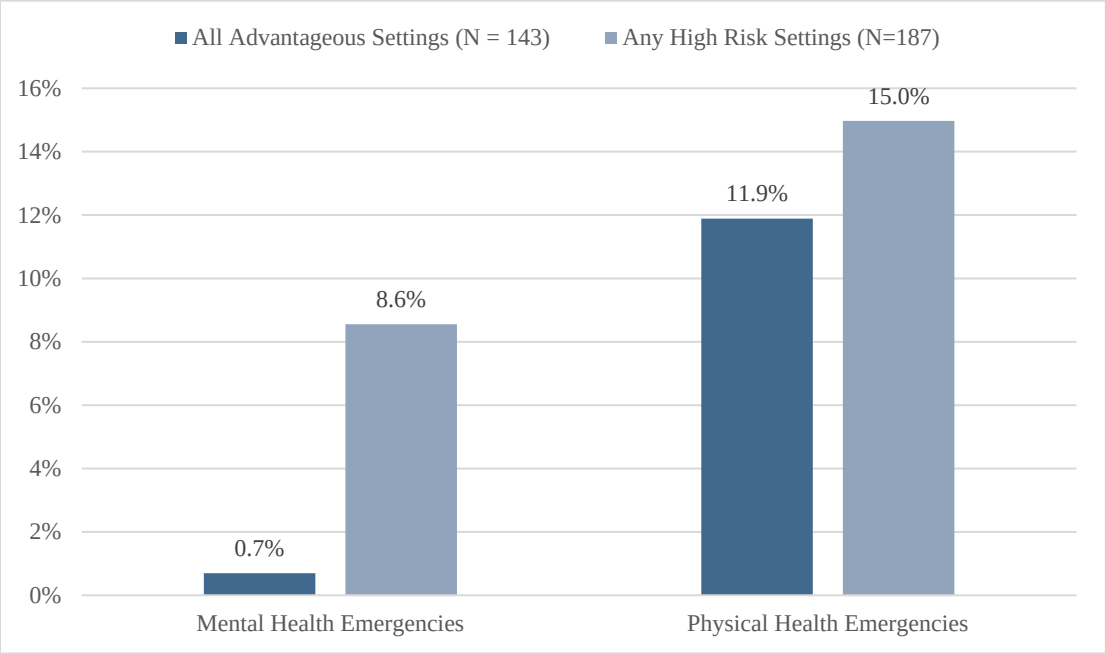


Mental and physical health emergencies by living situation

Exhibit 8 shows the percentage of adult and older adult partners living in advantageous vs higher risk living situations who had a mental or physical health emergency in their first year on 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 9: Emergency Outcomes as a Function of Residential Setting

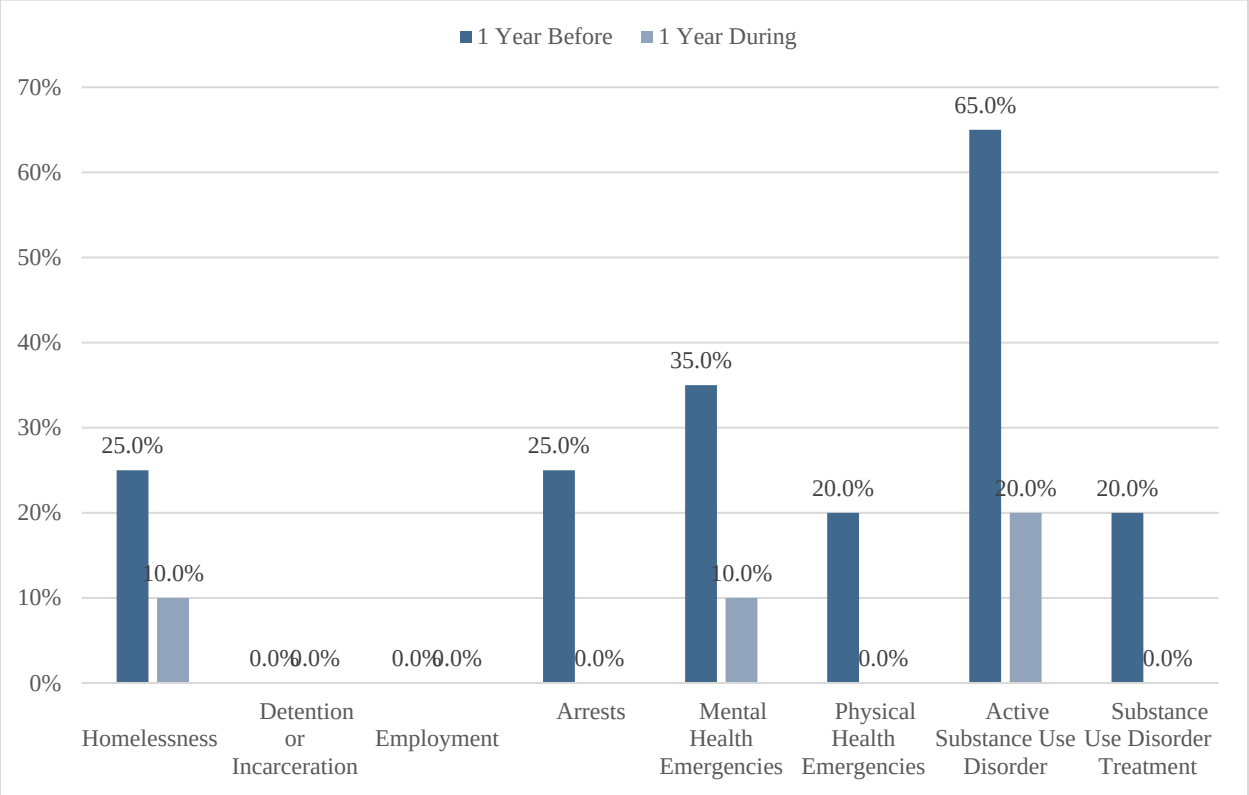


Telecare

Self-Reported Outcomes—All age groups

Because the Telecare data only includes 20 partners who have completed at least one year of FSP as of June 30, 2020, we present the findings for all age groups combined due to small sample size. The comparison of outcomes for all Telecare partners in the year prior to FSP enrollment with the first year in an FSP is shown in Exhibit 10. Homelessness, arrests, self-reported mental and physical health emergencies, and substance use disorders all decreased. Each of these demonstrates improvements for partners in the first year of FSP enrollment. Fewer Telecare partners reported substance use disorder treatments one year during the FSP program compared with one year before enrollment.

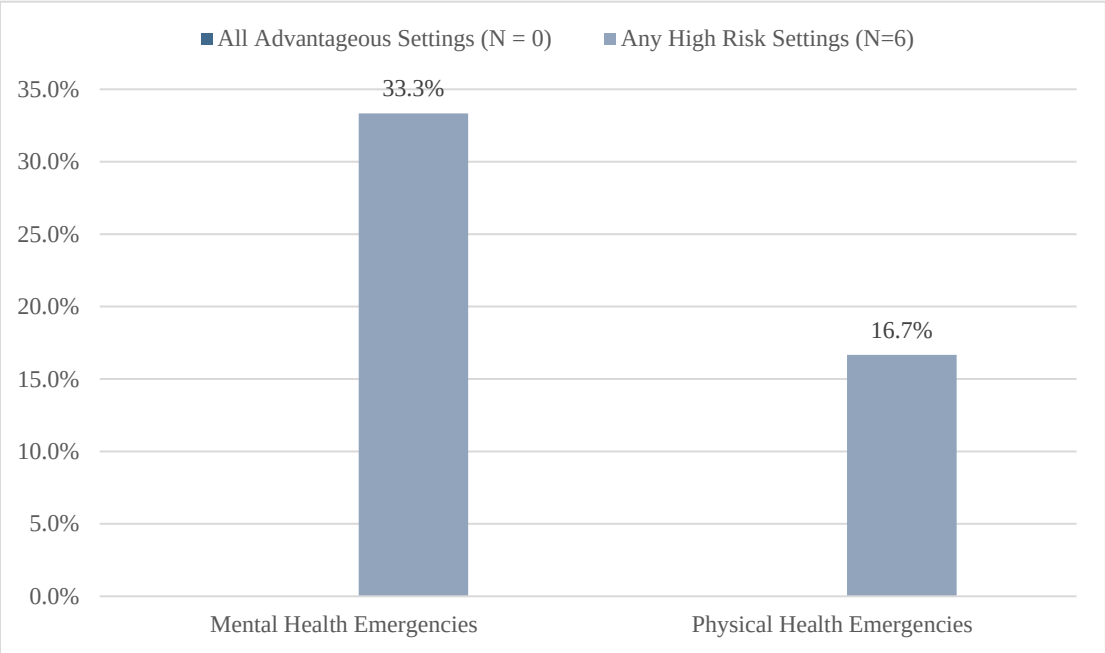
Exhibit 10: Outcomes for Telecare Partners Completing One Year with FSP (n = 20)



Mental and physical health emergencies by living situation

Exhibit 11 shows the percentage of Telecare adult and older adult partners living in advantageous vs higher risk living situations who had a mental or physical health emergency in their first year on FSP. As shown in the exhibit, both mental and physical health emergencies only happened with individuals who experienced a high-risk residential setting in their first year of FSP participation.

Exhibit 11: 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, (2) healthcare utilization by age group, and (3) healthcare utilization for partners over time (2006-2020).

Four hospitalization outcomes are presented for the 213 child, 185 TAY, 329 adult, and 53 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.

Note that the difference in the number of partners across the data sources is due to the difference in age group definition (see Appendix D) and not every partner has a health care record in the County's EHR system.

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 12). Percent of partners with any hospitalization decreased from 22% before FSP to 11% during FSP. Days in the hospital decreased from 6.92 days before FSP to 2.37 days during FSP. Percent of partners with any psychiatric emergency services (PES) decreased from 42% before FSP to 27% during FSP. The average number of PES events decreased from 1.20 events before FSP to 0.71 events during FSP.

Exhibit 12: FSP Partners Have Significantly Improved Hospitalization Outcomes (n=780)

	Mean	95% Confidence Interval
Percent of Partners with Any Hospitalization*		
1 Year Before	22%	(19% - 25%)
Year 1 During	11%	(9% - 13%)
Mean Number of Hospital Days, per Partner*		
1 Year Before	6.92	(5.48 - 8.36)
Year 1 During	2.37	(1.73 - 3.41)
Percent of Partners with any PES Event*		
1 Year Before	42%	(39% - 46%)
Year 1 During	27%	(24% - 30%)
Mean PES Events, per Partner*		
1 Year Before	1.20	(1.03 - 1.37)
Year 1 During	0.71	(0.58 - 0.84)

*Significance testing was conducted using Chi-square analysis for percentages and t-tests for means; results are statistically significant at the 95% level.

Health Care Utilization for FSP Partners by Age Group

Hospitalization outcomes are presented in Exhibits 13-16, 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 also decreased after FSP enrollment for all but the older adult group. The average number of PES events decreased after FSP enrollment for all the age groups.

Exhibit 13: Hospitalization and PES Outcomes for Adult Partners Completing One Year with FSP (n = 313)

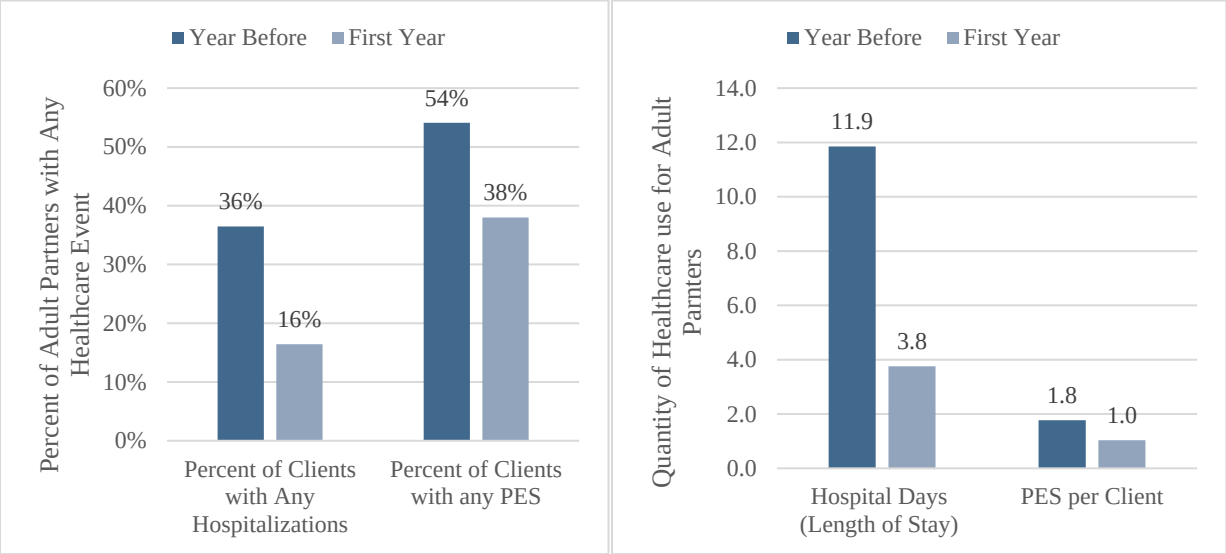


Exhibit 14: Hospitalization and PES Outcomes for Older Adult Partners Completing One Year with FSP (n = 53)

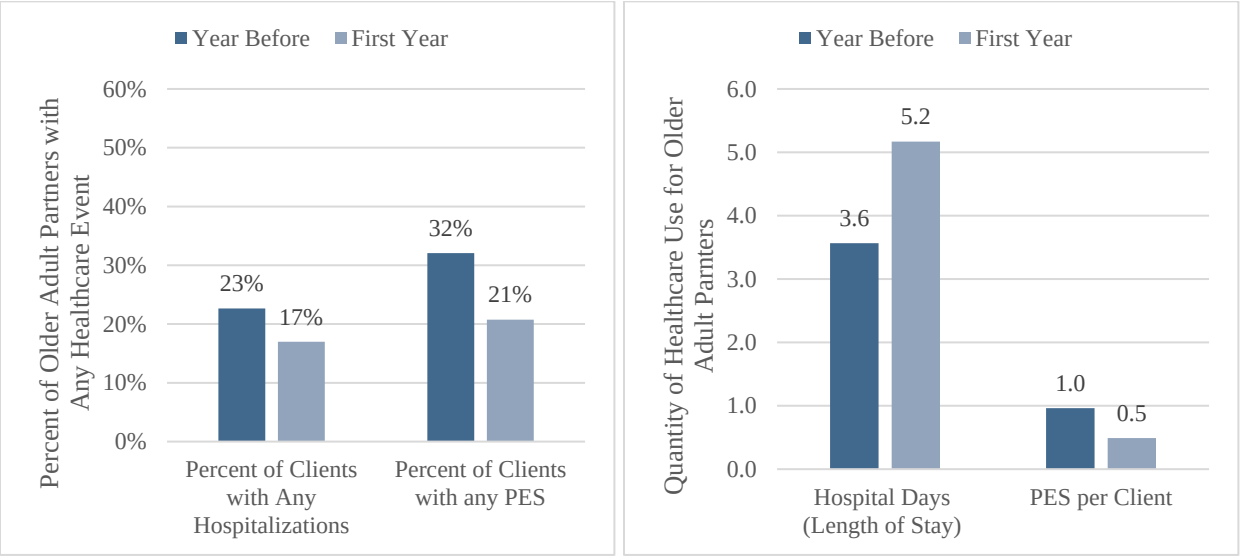


Exhibit 15: Hospitalization and PES Outcomes for Child Partners Completing One Year with FSP (n = 213)

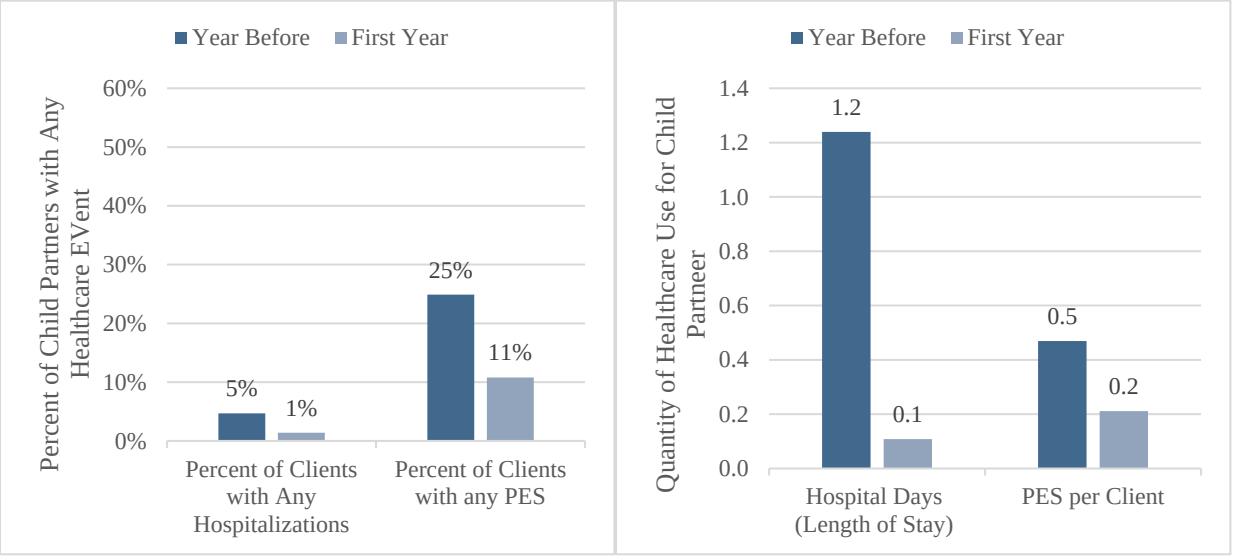
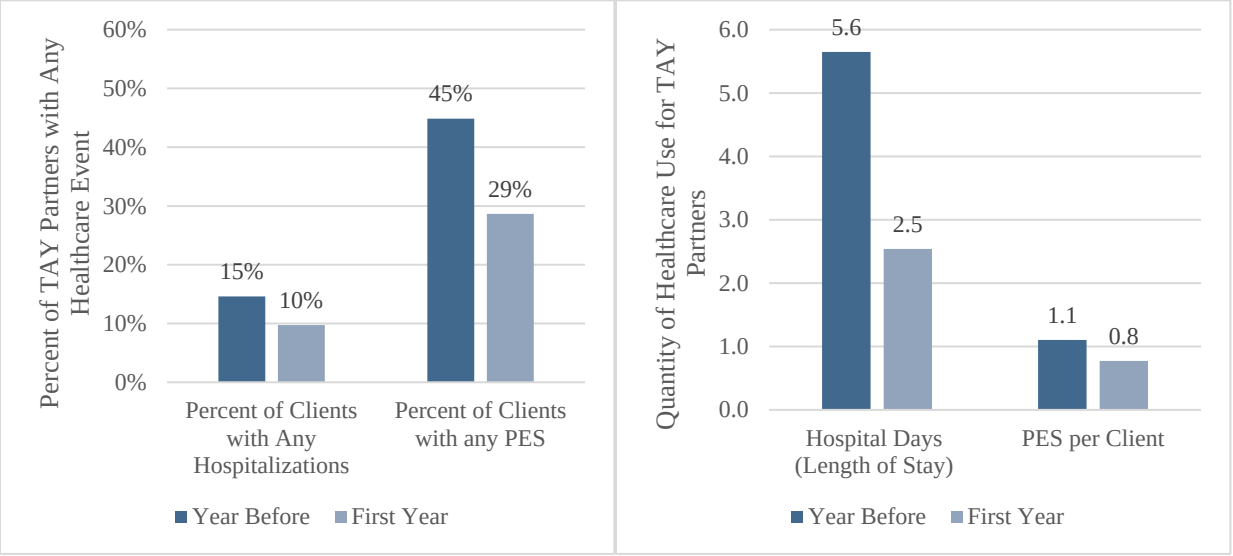


Exhibit 16: Hospitalization and PES Outcomes for TAY Partners Completing One Year with FSP (n = 185)



Health Care Utilization for FSP Partners over Time

Exhibits 17-20 show the four hospitalization outcomes, stratified by enrollment year. As can be seen in Exhibit 17, the percent of partners with any hospitalization decreased after joining an FSP program for all enrollment year cohorts.

Exhibit 17: Percent of Partners with Any Hospitalization by FSP enrollment year.

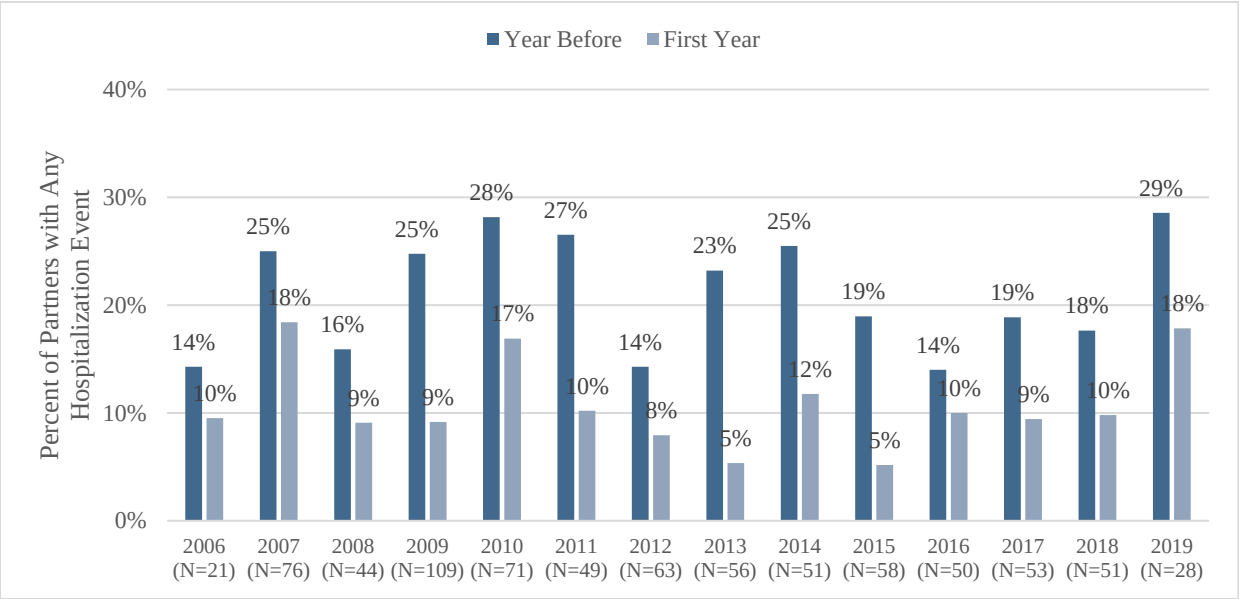


Exhibit 18 displays the mean hospital days per partner by enrollment year. With the exception of 2006 and 2007 cohorts, most partners experienced decreases in the mean number of hospital days regardless of when they enrolled in the program.

Exhibit 18: Mean Number of Hospital Days by FSP Enrollment Year

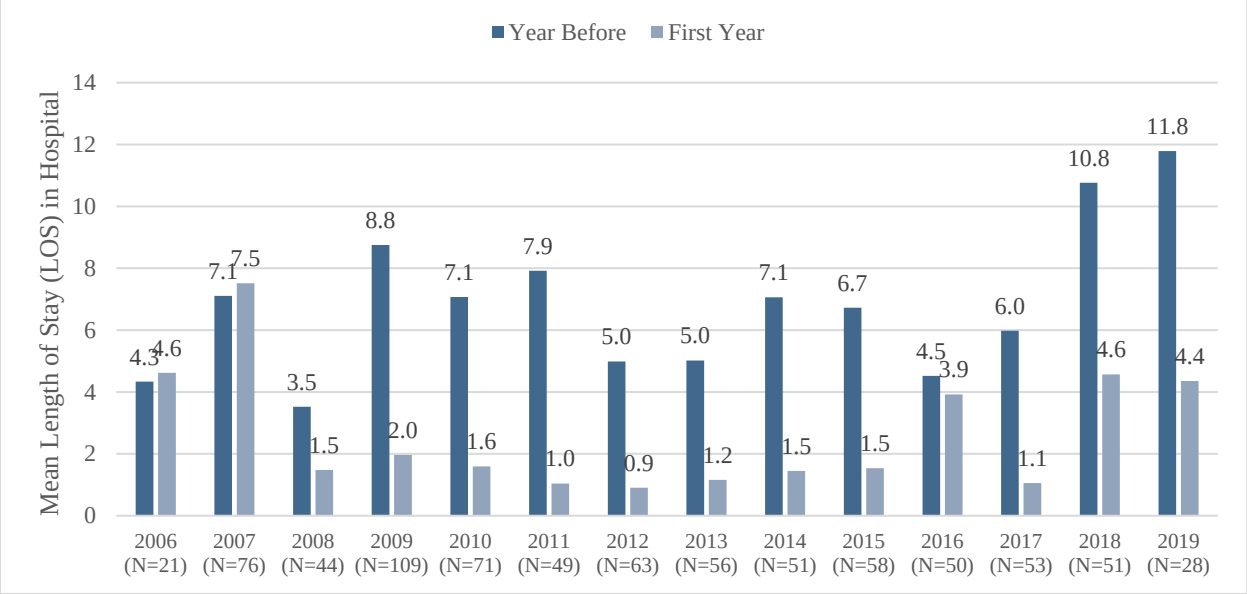
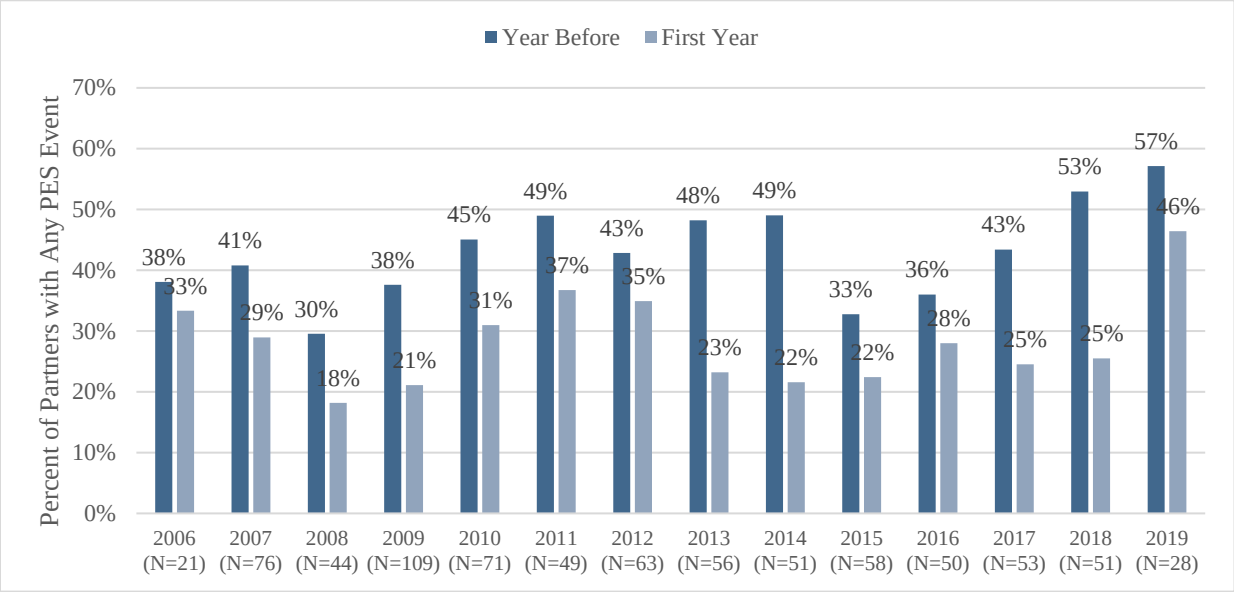


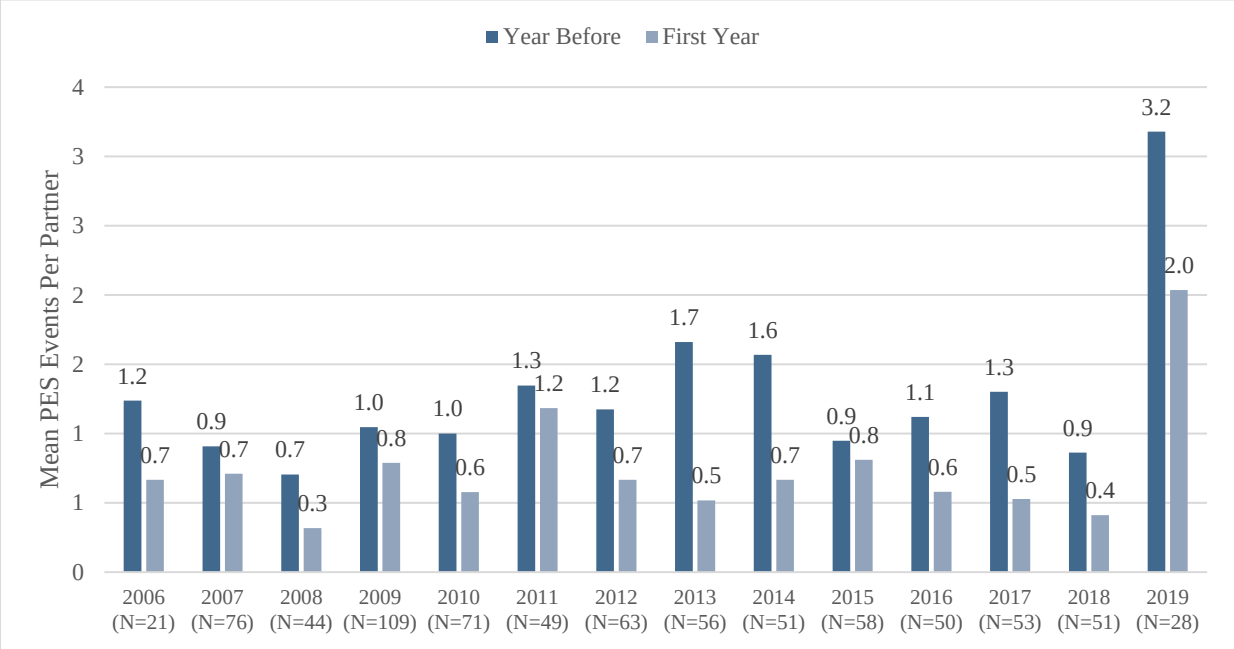
Exhibit 19 displays the percent of partners with any PES event by the year they began FSP. All cohorts experienced a decline in the likelihood of a PES event.

Exhibit 19: Percent of Partners with any PES Event by FSP Enrollment Year



Finally, exhibit 20 displays the mean PES events per partner by FSP enrollment year. Again, all cohorts experienced a reduction in PES events.

Exhibit 20: Mean PES Events by FSP Enrollment Year



Appendix A: Self-Reported Outcomes by Race and Ethnicity among Caminar Partners

In this section, we present the self-reported outcomes by race and ethnicity using the FSP program survey data from Caminar. The survey data from Caminar contains the most complete information on race and ethnicity among all FSP providers in the County. Among 154 partners from Caminar, the race and ethnicity data are available for 138 of them, where 69 reported as White, 15 Black, 19 Asian, Native Hawaiian or Other Pacific Islander (AAPI), 14 Hispanic, and 21 of other races.

The findings from the self-reported outcomes suggest that the majority of outcomes improved (30 of 40 outcomes) for all reported race and ethnicity groups. Exhibit A1, below, presents the percent change between the year just prior to enrollment in an FSP and the first year enrolled in an FSP, by race and ethnicity. Red (and bold) font in the Exhibit indicates percent change that was not favorable.

Exhibit A1 shows improvements for all race and ethnicity groups for the following self-reported outcomes: mental health emergencies, and physical health emergencies. Partners from all race and ethnicity groups except for the AAPI more or as frequently reported receiving substance use disorder treatment in the year following their enrollment of the FSP program, which may indicate that the integrated care and case management services offered through FSP connected partners with needed care. Among all race and ethnicity groups, partners who self-identified as White had improvements with all outcomes. Black partners had improvements on 6 out of 8 outcomes, while they had no change on employment and substance use disorder treatment. Hispanic partners had improvements on 7 out of 8 outcomes, but they more frequently reported active problems with substance use in their first year with FSP than in the year prior to joining the program. AAPI partners improved on 4 out of 8 outcomes (the fewest among the five race and ethnicity groups), while they did not improve on homelessness and incarceration, had more arrests, and less frequently reported substance use disorder treatment. Partners of other races improved on 5 outcomes, they did not improve on homelessness, employment, or having an active problem with substance use in their first year with FSP than in the year prior to joining the program.

Exhibit A1: Percent Change in Outcomes by Race and Ethnicity, Year before FSP Compared with First Year with FSP, among Caminar Partners

FSP Outcomes *Self-reported Outcomes*	**White N = 69**			**Black N = 15**		
	Yr before	*Yr after*	*change*	*Yr before*	*Yr after*	*change*
Homelessness	26	16	-38%	8	6	-25.0%
Detention or Incarceration	16	9	-44%	6	4	-33.3%
Employment	0	1	N/A	0	0	N/A
Arrests	11	1	-91%	3	0	-100.0%
Mental Health Emerg.	50	11	-78%	11	2	-82%
Physical Health Emerg.	27	8	-70%	8	3	-63%
Active S.U. Disorder	33	31	-6%	8	6	-25%
S.U. Treatment	15	16	7%	3	3	0%
FSP Outcomes	**Hispanic**			**AAPI**		

Self-reported Outcomes	N = 14			N = 19		
	Yr before	*Yr after*	*change*	*Yr before*	*Yr after*	*change*
Homelessness	6	5	-17%	5	5	0%
Detention or Incarceration	6	3	-50%	3	3	0%
Employment	0	1	N/A	0	1	N/A
Arrests	4	1	-75%	0	1	**N/A**
Mental Health Emerg.	12	3	-75%	14	6	-57%
Physical Health Emerg.	6	2	-67%	7	3	-57%
Active S.U. Disorder	8	9	**13%**	9	4	-56%
S.U. Treatment	4	7	75%	4	0	-100%
FSP Outcomes Self-reported Outcomes	**Other Races N =21**					
	Yr before	*Yr after*	*change*			
Homelessness	2	2	0%			
Detention or Incarceration	5	2	-60%			
Employment	0	0	N/A			
Arrests	3	0	-100%			
Mental Health Emerg.	14	2	-86%			
Physical Health Emerg.	8	3	-63%			
Active S.U. Disorder	9	9	0%			
S.U. Treatment	5	8	60%			

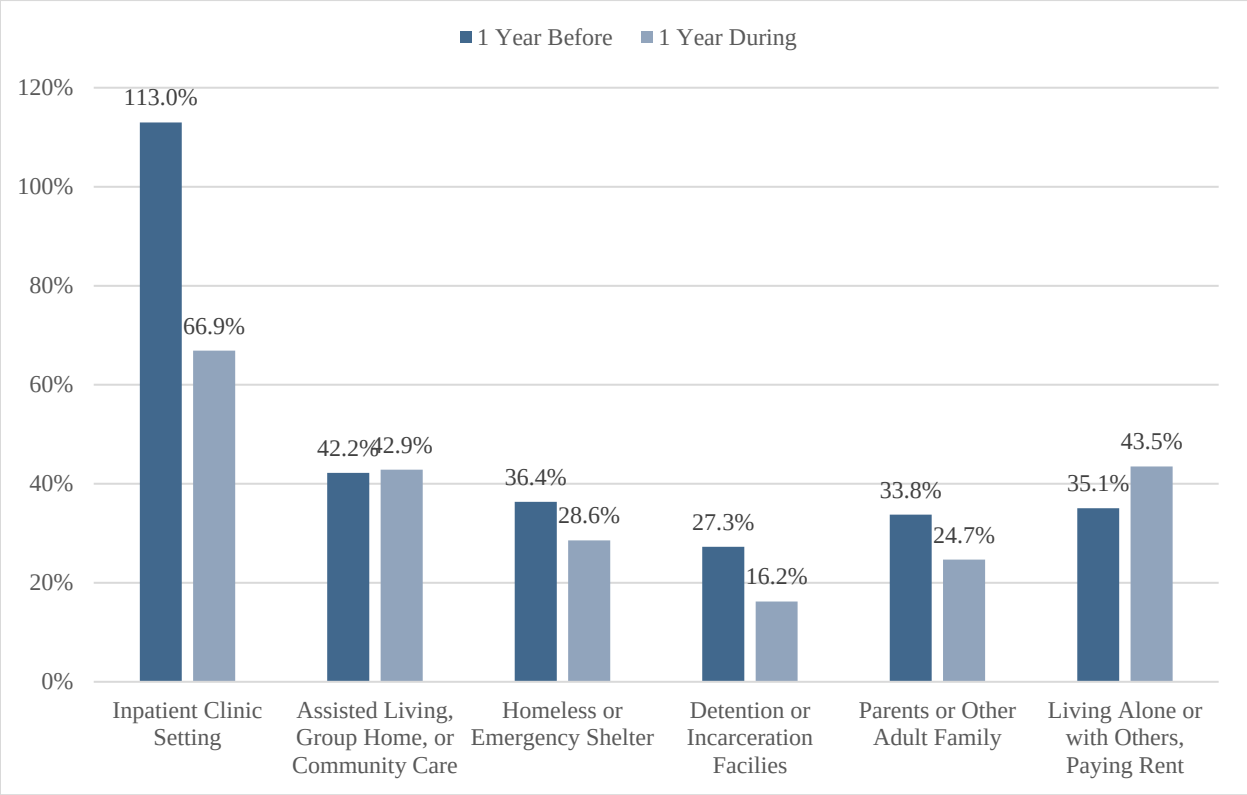
Note. The table above indicates the percent change in the percent of partners with any events, comparing the year just prior to FSP with the first year on FSP. Red (and bold) font indicates outcomes that worsened, such as more active substance use disorder for Hispanic partners or more arrests for AAPI partners.

Appendix B: Additional Detail on Residential Outcomes

For residential setting outcomes, 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. A list of all residential settings and how they are categorized, is presented in Appendix D with the methodological approach.

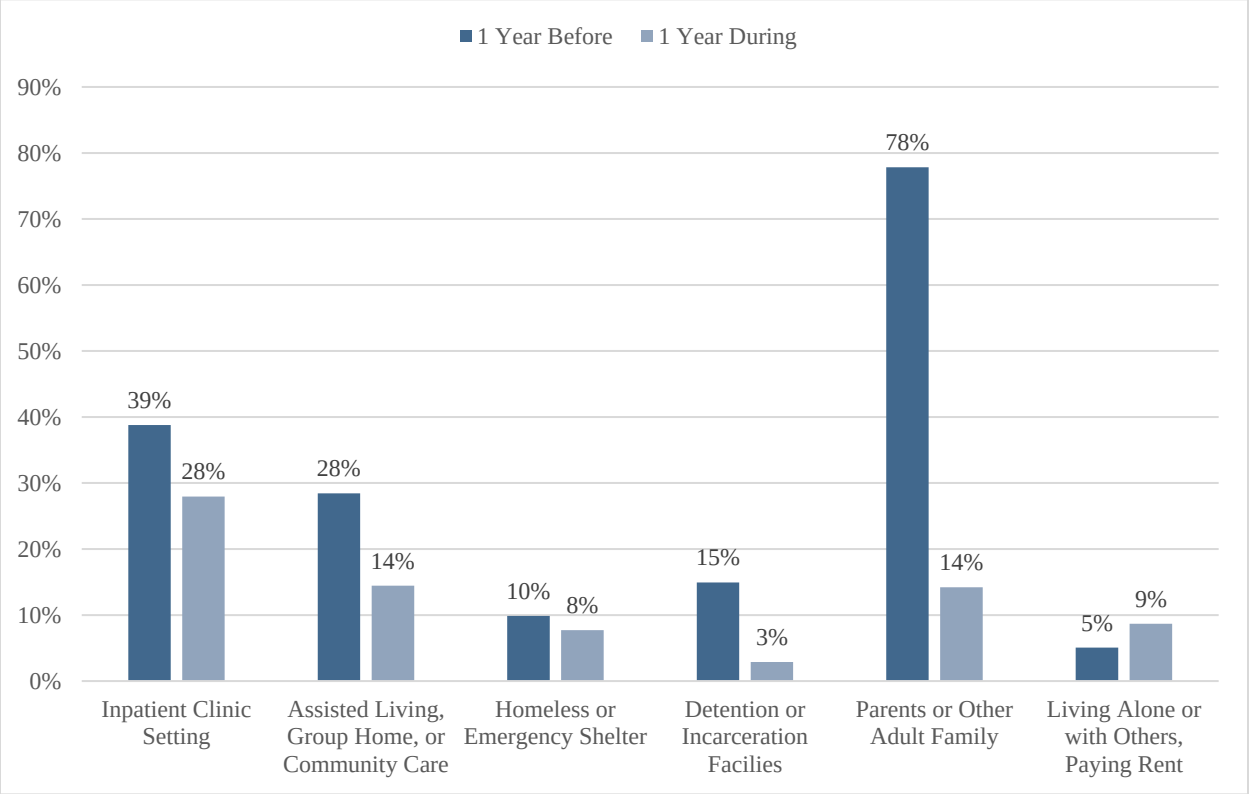
As can be seen in Exhibit B1, the percent of clients reporting any time in an inpatient clinic, homeless, incarcerated, or living with parents decreases. In contrast, the percent of clients reported any time in assisted living, group home, or community care environment, and those who reported living alone or with others, paying rent increases.

Exhibit B1: Any Time in Residential Settings – Adult and Older Clients from Caminar Completing 1 Year in the FSP Program (n = 154)



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

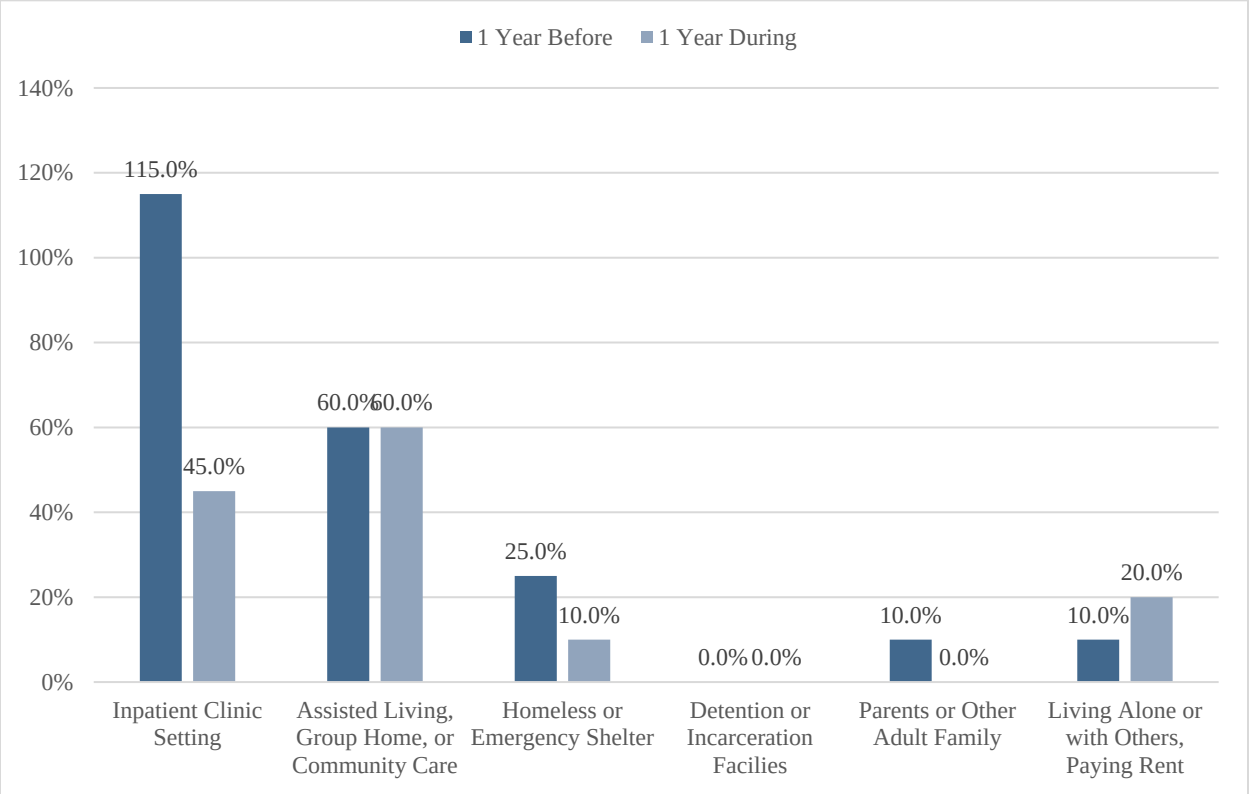
Exhibit B2: Any Time in Residential Settings – Child and TAY Clients from Edgewood/ Fred Finch Completing 1 Year in the FSP Program (n = 415)



Telecare

As shown in Exhibit B3, the percent of Telecare clients reporting any time in an inpatient clinic, homeless, or living with parents decreases. In contrast, the percent of clients who reported living alone or with others, paying rent increases.

Exhibit B3: Any Time in Residential Settings – Telecare Clients Completing 1 Year in the FSP Program (n = 20)



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

Appendix C: 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 C1-C3, 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 percent change in the percent of partners with any events.

As can be seen in Exhibit C1, 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 C1. 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)

Survey Outcomes, Caminar	1 Year Before	Year 1 During	Change (%)
Homelessness	36.4%	28.6%	-21.4%
Detention or Incarceration	27.3%	16.2%	-40.5%
Arrests	26.6%	3.2%	-87.8%
Mental Health Emergencies	72.7%	18.2%	-75.5%
Physical Health Emergencies	40.3%	12.3%	-69.4%
Employment	0.6%	2.6%	300%
Active Substance Use Disorder	48.7%	43.5%	-10.7%
Substance Use Disorder Treatment	21.4%	25.3%	18.2%

As can be seen in Exhibit C2, 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 detention or incarceration, employment, and substance use disorder treatment. The percent difference with any detention or incarceration and employment is reported as N/A because the percent of partners with detention or incarceration and employment did not change (from 0% to 0%). Thus, the denominator is 0.

Exhibit C2. 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)

Survey Outcomes, Telecare	1 Year Before	Year 1 During	Change (%)
Homelessness	25.0%	10.0%	-60.0%
Detention or Incarceration	0.0%	0.0%	N/A
Arrests	25.0%	0.0%	-100.0%
Mental Health Emergencies	35.0%	10.0%	-71.4%
Physical Health Emergencies	20.0%	0.0%	-100.0%
Employment	0.0%	0.0%	N/A
Active Substance Use Disorder	65.0%	20.0%	-69.2%

Substance Use Disorder Treatment	20.0%	0.0%	**-100.0%**

Red (bold) font indicates outcomes that worsened, such as less frequently reported substance use disorder treatment.

Exhibit C3 shows improvement in many outcomes except for grade and attendance.

Exhibit C3. Percent of Edgewood Partners with Outcome Events by Year and Percent Change in Prevalence of Outcome Events (Year before FSP vs. the first year of FSP participation)

Survey Outcomes, Edgewood	1 Year Before	Year 1 During	Change (%)
Homelessness	9.9%	8.4%	-14.6%
Detention or Incarceration	14.9%	14.2%	-4.8%
Arrests	40.7%	7.2%	-82.2%
Mental Health Emergencies	42.2%	7.7%	-81.7%
Physical Health Emergencies	16.9%	1.4%	-91.4%
Suspension	15.4%	6.0%	-82.1%
Grade	3.36	3.06	-9.0%
Attendance	2.25	2.08	-7.5%

Appendix D: 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 (Fred Finch/Edgewood, Caminar, and Telecare), 589 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. 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—data from December 2018 onward. Therefore, the main analysis of this report includes all Caminar and Edgewood 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 D1 below describes the age group of partners completing at least one full year of FSP by provider. For Telecare, this data includes December 2018 through June 2020.

Exhibit D1: Summary of Partners One Full Year of FSP

Age Group	Edgewood/ Fred Finch	Caminar	Telecare	Total*
Child (aged 16 and younger)	185	--	--	185
TAY (aged 17 – 25)	230	26	1	257
Adult (aged 26 -59)	--	111	16	127
Older Adult (aged 60+)	--	17	3	20
Total	415	154	20	589

*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, 2020.

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 D2).
2. The baseline data were populated using the variable *PastTwelveDays* (Caminar and Edgewood) 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) 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) 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) 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 D2: Residential Setting Categories and Corresponding Classification Values used to Derive Them

Category	Telecare, Caminar, Edgewood, and Fred Finch Setting Value[4]
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

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

Employment

Employment outcomes were generated for adults only. Therefore, Edgewood and 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) 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) or *emr_mental_p12* (Telecare)*)* and physical health emergencies (*PhysRelated* (Caminar and Edgewood) or *emr_physical_p12* (Telecare)*),* respectively. If either of these fields were blank, the partner was assumed to have 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) 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) or *sub_co_mh_sa_probl_past* (Telecare)*)* and participation in substance use disorder treatment and recovery services (*AbuseServices* (Caminar and Edgewood) 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 780 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 2020 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 2019.

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 D3 shows the corresponding program codes. Additionally, FSP episodes were identified through the Avatar *episode_history* table.

Exhibit D3: 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 August 19, 2019.

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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