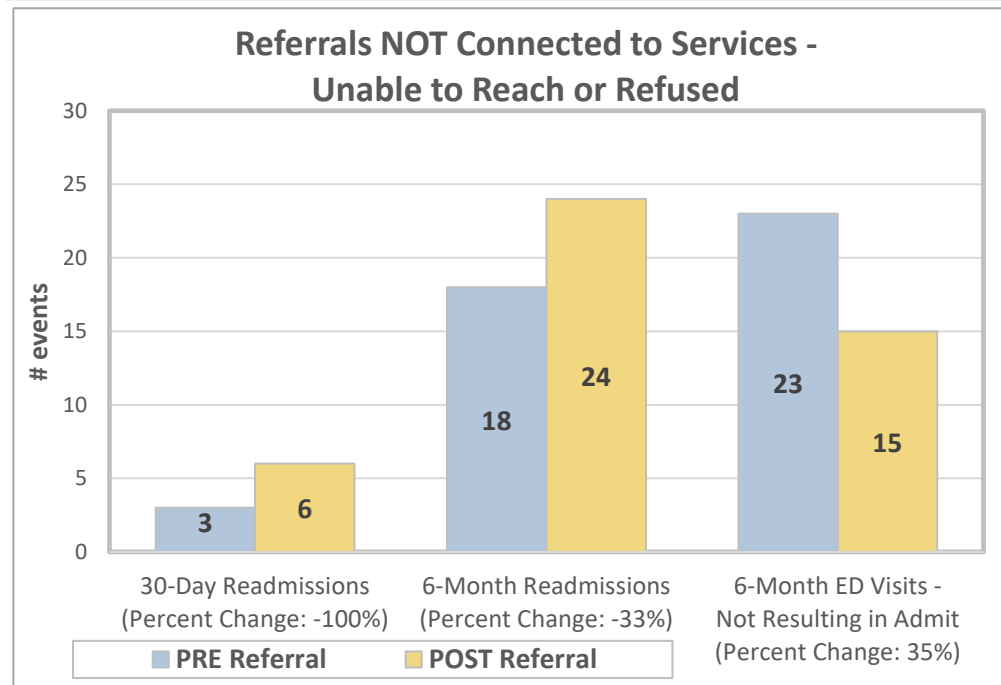
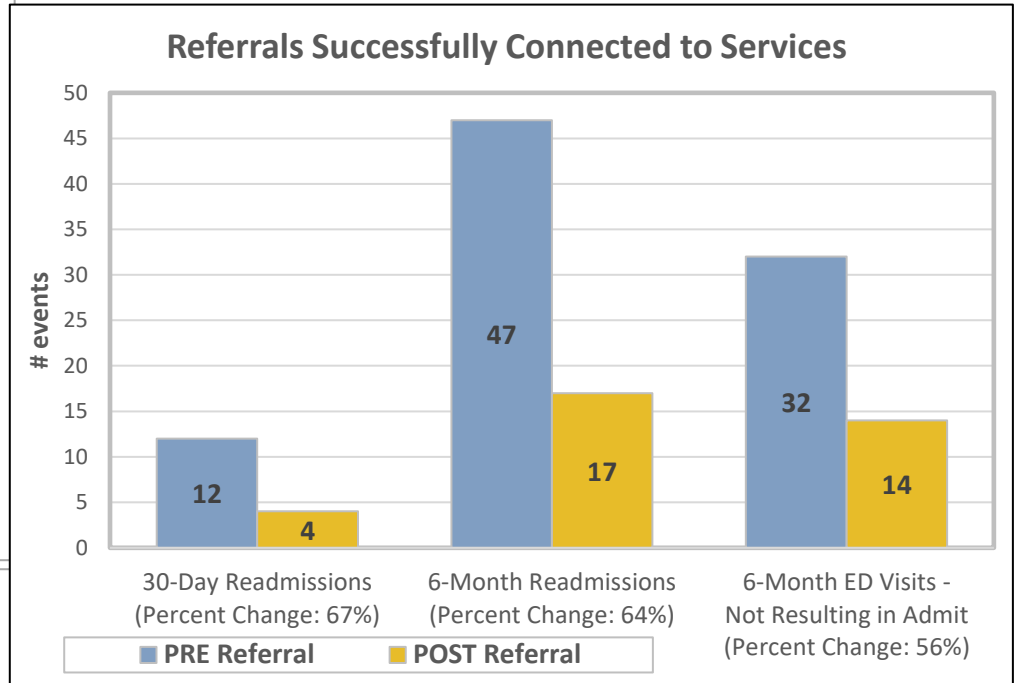
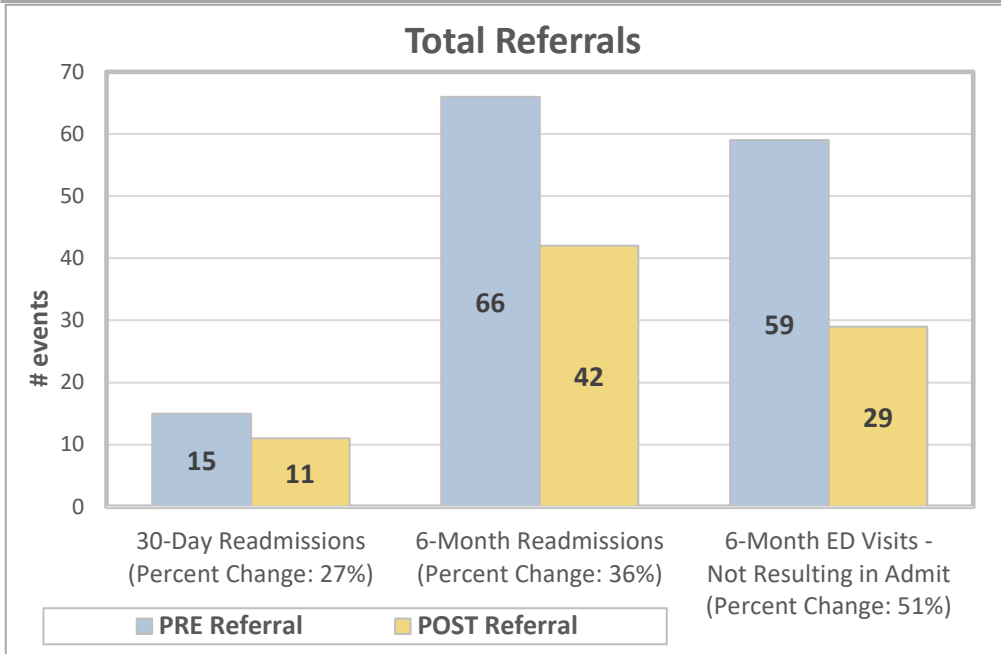


CBH Pilot Project - Patient Outcomes Report

(Includes Outcomes of CBH referrals made between April 2017 - August 2017)

Healthcare Utilization Events - Pre-Referral vs. Post-Referral Outcomes



Key Findings:

Among the total population of patient referrals between April 2017 - August 2017, a decline in healthcare utilization before and after referral to AAADSW occurred for all three categories of events reviewed (i.e. 30-day readmissions, 6-month readmissions, and ED Visits Not Resulting in an Admission).

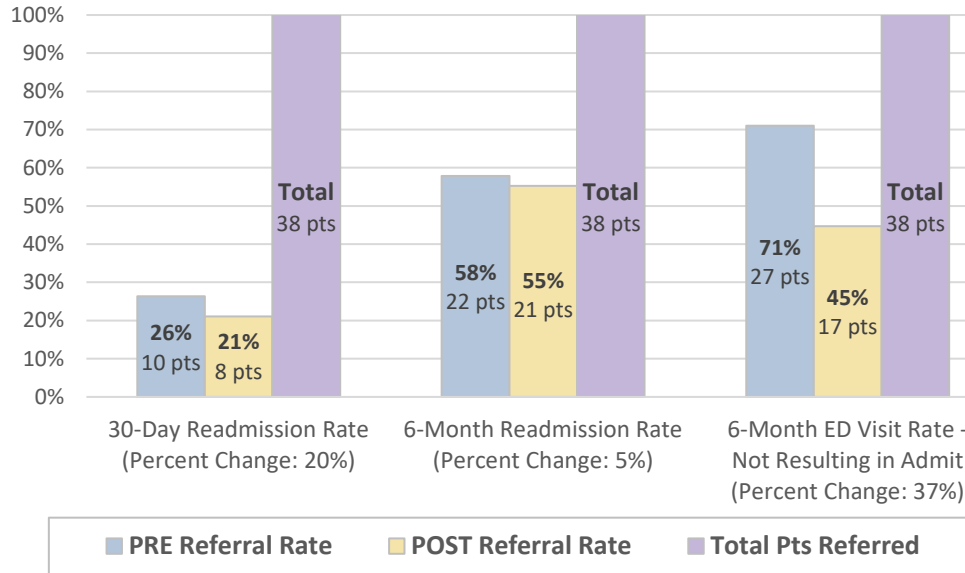
The reduction in healthcare utilization becomes more pronounced when drilling down to the subset of the referral population that were successfully connected to services. Among the referral population successfully connected to services, there was a 67% decrease in 30-day readmissions, a 64% decrease in 6-month readmissions, and a 56% reduction in ED Visits Not Resulting in an Admission.

In contrast, among the population of referrals who were NOT connected to services, either because they could not be reached or they refused services, there was an increase in both 30-day and 6-month readmissions.

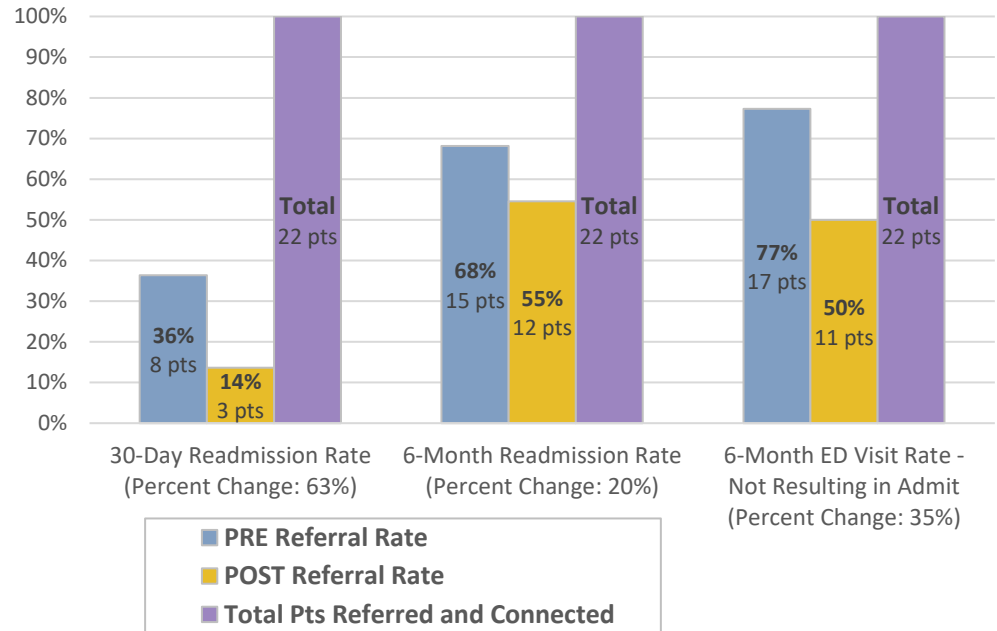
Healthcare Utilization Rate* - Re-Referral vs. Post-Referral Outcomes

*Percent of total patient referrals with 1 or more healthcare utilization event during defined time period

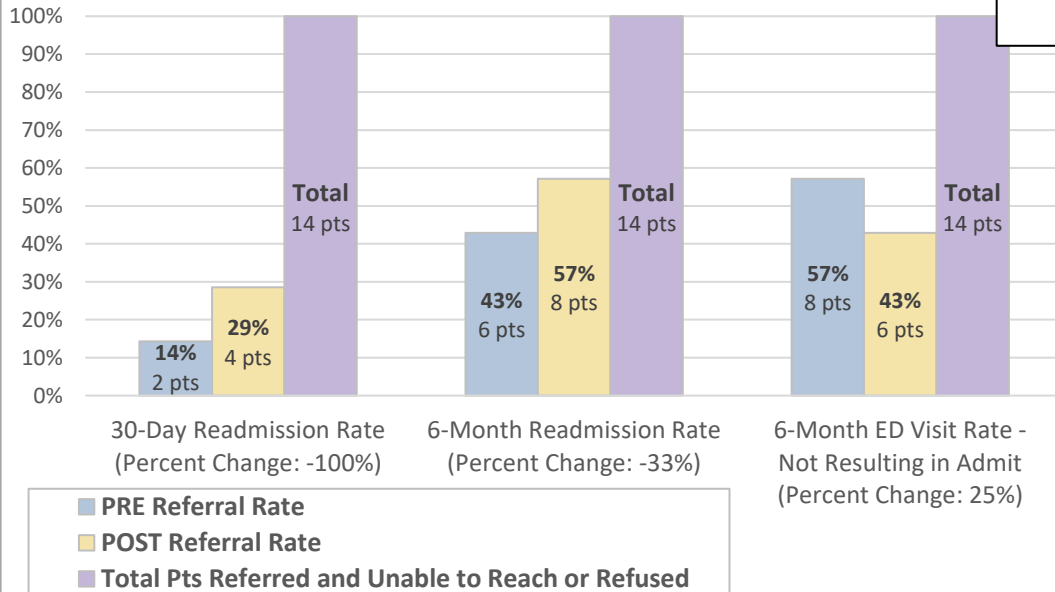
Total Referrals



Referrals Successfully Connected to Services



Referrals NOT Connected to Services - Unable to Reach or Refused



Key Findings:

A decline in healthcare utilization before and after referral to AAADSW is also exemplified by a reduction in the *rate* of 6-month readmissions, 30-day readmissions, and 6-month ED Visits among the total population of patient referrals between April 2017 - August 2017. In other words, the percentage of patients with 1 or more admission(s) or ED visit(s) is higher for the 6 month pre-referral time-period, compared to the 6 months post-referral. This reduction in the *rate* of healthcare utilization becomes more pronounced when drilling down to the subset of the referral population that were successfully connected to support services.

Simple ROI Analysis

Inputs <i>(can be changed as appropriate)</i>		
Cost Assumptions		
Cost of Admission		\$11,000
Cost of ED Visit		\$1,500
Outcomes/Intervention Assumptions		
	Readmissions (6 Months)	ED Visits (6 Months)
Number of Pre-Services	66	59
Number of Post-Services	42	29

Cost Comparison		
*Assuming Readmission/ED Visit Rate holds constant and not projected to shift down due to any other factors		
Projected Cost of Readmission (6 Months) Pre-Services		\$726,000
Projected Cost of ED Visits (6-Months) Pre-Services	+	\$88,500
Total Cost Pre-Screening/Referral		\$814,500
Projected Cost of Readmissions (6 Months) Post-Services		\$462,000
Projected Cost of ED Visits (6 Months) Post-Services	+	\$43,500
Cost of .5 FTE performing screenings/referrals	+	\$35,000
Total Cost Post-Screening/Referral		\$540,500
Total Savings		\$274,000

Key Findings:

This simple ROI estimates the average cost of an inpatient stay and ED visit among dual-eligible beneficiaries, as well as assumes .5 FTE dedicated to performing screenings and referrals. **Please note these assumptions may be adjusted as appropriate.**

Taking these assumptions into account, **this ROI has identified a hospital savings of \$274,000 from a reduction in healthcare utilization** 6 months before and after patient referral to AAADSW.

Please note this ROI does not take into account the cost of services performed by AAADSW and partnering network of community support organizations.

Patient Outcomes Data Table

	Total Population Referred						Population Referred and Connected to Resources						Population Referred and NOT Connected to Services <i>(unable to contact or refused only)</i>					
	Apr	May	June	July	Aug	TOTAL	Apr	May	June	July	Aug	TOTAL	Apr	May	June	July	Aug	TOTAL
Total Patients within Population:	10	2	1	12	13	38	4	1	0	8	9	22	5	0	1	4	4	14
Healthcare Utilization Events - Pre-Referral vs. Post-Referral Outcomes																		
30-Day Readmissions -- Percent Change	60%	NA	NA	25%	0%	27%	80%	NA	NA	100%	0%	67%	NA	NA	NA	-300%	0%	-100%
# of admissions within 30 days prior to referral	5	0	0	4	6	15	5	0	0	4	3	12	0	NA	0	0	3	3
# of admissions within 30 days post referral	2	0	0	3	6	11	1	0	0	0	3	4	0	NA	0	3	3	6
6-Month Readmissions -- Percent Change	56%	0%	100%	21%	34%	36%	80%	0%	NA	54%	61%	64%	-300%	NA	100%	-50%	-9%	-33%
# of admissions within 6 months prior to referral	16	1	1	19	29	66	15	1	0	13	18	47	0	NA	1	6	11	18
# of admissions within 6 months post referral	7	1	0	15	19	42	3	1	0	6	7	17	3	NA	0	9	12	24
6 Month ED Visits (No Admit) -- Percent Change	33%	33%	NA	57%	57%	51%	57%	-100%	NA	67%	61%	56%	-67%	NA	NA	50%	50%	35%
# of ED Visits within 6 months prior to referral	12	3	0	14	30	59	7	1	0	6	18	32	3	NA	0	8	12	23
# of ED Visits within 6 months post referral	8	2	0	6	13	29	3	2	0	2	7	14	5	NA	0	4	6	15
Healthcare Utilization Rate - Re-Referral vs. Post-Referral Outcomes																		
30-Day Readmission Rate -- Percent Change	33%	NA	NA	33%	0%	20%	67%	NA	NA	100%	0%	63%	NA	NA	NA	-200%	0%	-100%
PRE-Referral - 30-Day Readmission Rate	30%	0%	0%	25%	31%	26%	75%	0%	NA	38%	22%	36%	0%	NA	0%	0%	50%	14%
# referrals hospitalized within 30-days prior	3	0	0	3	4	10	3	0	0	3	2	8	0	0	0	0	2	2
POST-Referral - 30-Day Readmission Rate	20%	0%	0%	17%	31%	21%	25%	0%	NA	0%	22%	14%	0%	NA	0%	50%	50%	29%
# referrals hospitalized within 30-days post	2	0	0	2	4	8	1	0	0	0	2	3	0	0	0	2	2	4
6-Month Readmission Rate -- Percent Change	0%	0%	100%	0%	0%	5%	50%	0%	NA	20%	0%	20%	-200%	NA	100%	-50%	0%	-33%
PRE-Referral - 6-Month Readmission Rate	50%	50%	100%	58%	62%	58%	100%	100%	NA	63%	56%	68%	0%	NA	100%	50%	75%	43%
# referrals hospitalized within 6-months prior	5	1	1	7	8	22	4	1	0	5	5	15	0	0	1	2	3	6
POST-Referral - 6-Month Readmission Rate	50%	50%	0%	58%	62%	55%	50%	100%	NA	50%	56%	55%	40%	NA	0%	75%	75%	57%
# referrals hospitalized within 6-months post	5	1	0	7	8	21	2	1	0	4	5	12	2	0	0	3	3	8
6-Month ED Visit Rate (No Admit) -- Percent Change	29%	50%	NA	38%	40%	37%	0%	0%	NA	60%	38%	35%	33%	NA	NA	0%	50%	25%
PRE-Referral - 6-Month ED Visit Rate	70%	100%	0%	67%	77%	71%	75%	100%	NA	63%	89%	77%	60%	NA	0%	75%	50%	57%
# referrals with ED visit (no admit) w/in 6-months prior	7	2	0	8	10	27	3	1	0	5	8	17	3	0	0	3	2	8
6-Month ED Visit Rate -- POST-Referral	50%	50%	0%	42%	46%	45%	75%	100%	NA	25%	56%	50%	40%	NA	0%	75%	25%	43%
# referrals with ED visit (no admit) w/in 6-months post	5	1	0	5	6	17	3	1	0	2	5	11	2	0	0	3	1	6