

HEALTH CONNECT 360® FROM EXPRESS SCRIPTS PBM

+ THE IMPACT OF CLINICAL CARE SUPPORT ON PHARMACY AND MEDICAL COST AND UTILIZATION

AN EVERNORTH REPORT
FEBRUARY 2022



EXECUTIVE SUMMARY

Our research found that one year after implementing the [Health Connect 360®](#) approach plans experienced an overall reduction in costs, due to improved use of primary care physicians (PCP) and fewer inpatient hospitalizations (IH). The findings suggest that Health Connect 360 was able to identify members' unique health care needs and increase engagement, providing targeted, personalized outreach that resulted in:

- + Lower prescription and medical per-member-per-year (PMPY) costs
- + Improved utilization due to more primary care physician visits and fewer inpatient hospitalizations
- + Lower emergency room (ER) and inpatient hospitalization PMPY costs

BACKGROUND

Health Connect 360 is an outcomes-based approach that connects medical, pharmacy and other clinical data to provide personalized, clinical support for enrolled members, upon adoption of the approach by their plan sponsor. This outreach enables members to better manage their conditions and enjoy better quality of life, while reducing their overall health care costs.

Health Connect 360 works by analyzing data and using predictive analytics to discover clinical opportunities for members, and then leveraging the most effective, personalized care support to address each of those opportunities. For instance, we study attributes impacting a patient's adherence, such as age, gender and health status, and then use this data to personalize and prioritize solutions that best address adherence barriers for that individual.

Our experience shows there are many levers we can engage to influence adherence—everything from a gentle nudge to a more intensive, hands-on approach—which is important when addressing a wide spectrum of patient needs.

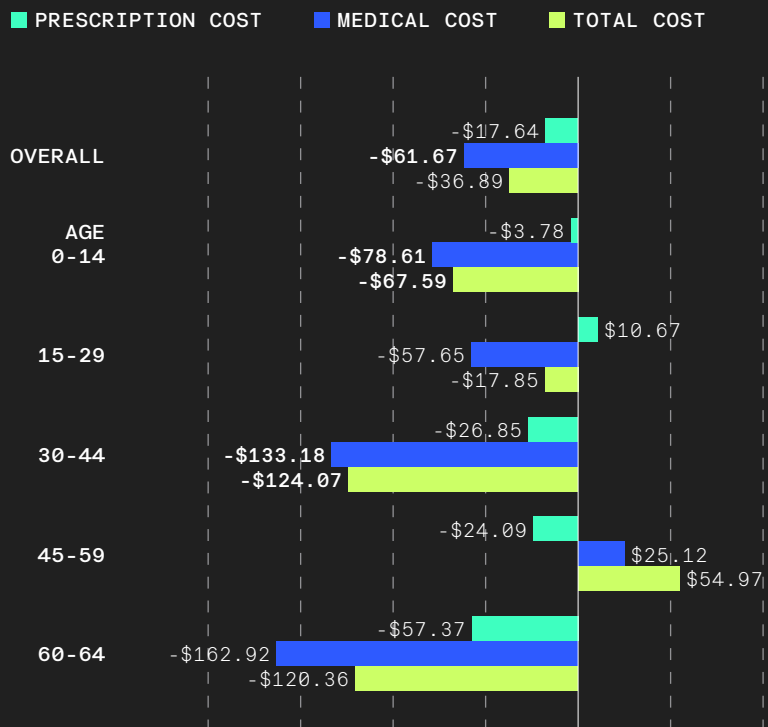
KEY FINDINGS

Lower Prescription and Medical Costs

Compared to members in the control group not enrolled in Health Connect 360, members who were enrolled in Health Connect 360 showed a \$61.67 decrease in average PMPY adjusted net medical costs ($p < 0.05$). In all age groups, with the exception of the 45-59 age group, lower average adjusted net medical costs were observed, with results in 0-14 (\$78.61) and 30-44 (\$133.18) age groups reaching statistical significance ($p < 0.05$). Lower adjusted net medical costs in the 0-14 and 30-44 age groups contributed to lower total health care costs of \$67.59 and \$124.07 respectively ($p < 0.05$).

Among the two groups, the net change in adjusted PMPY prescription cost was \$17.64 lower for members in Health Connect 360; however, the finding did not reach statistical significance. In all age groups, with the exception of 15-29, lower average net prescription costs were observed. None of these findings were statistically significant.

FIGURE 1: Adjusted difference in pharmacy and medical costs (PMPY) between Health Connect 360 and control groups*

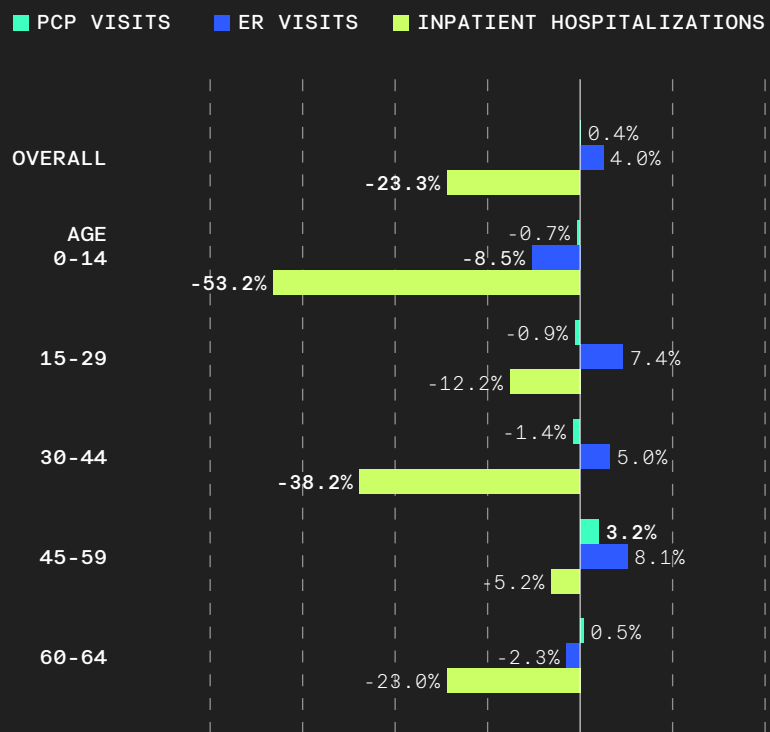


* $p < 0.05$ represented by bold results

Improved Utilization Due to More PCP Visits and Fewer Inpatient Hospitalizations

Members in the overall Health Connect 360 sample were estimated to have 23.3% ($p < 0.05$) fewer inpatient hospitalizations compared to the control group. Fewer inpatient hospitalizations were observed in the Health Connect 360 group for all age breakouts with those in the 0-14 and 30-44 age groups reaching statistical significance (53.2% and 38.2% respectively, $p < 0.05$). Members in the 45-59 age group saw a statistically significant ($p < 0.05$) difference in the percentage of PCP visits, realizing a 3.2% increase in the post period.

FIGURE 2: Percentage difference in number of PCP visits, ER visits and inpatient hospitalizations between Health Connect 360 and control groups*



* $p < 0.05$ represented by bold results

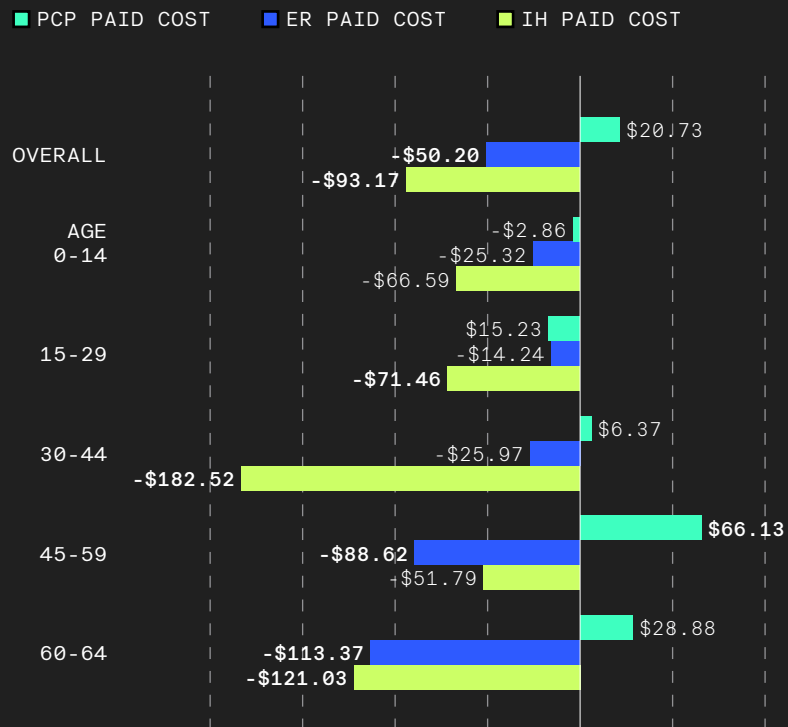
Lower ER and Inpatient Hospitalization Costs

A lower percentage of inpatient hospitalizations most likely contributed to overall decreases in related inpatient hospitalization adjusted net paid amounts for members in the Health Connect 360 group. Overall, the Health Connect 360 sample realized an average adjusted net decrease of \$93.17 PMPY compared to the control group. Average net paid cost decreased in all age breakouts, with those in the 15-29 (\$71.46), 30-44 (\$182.52), 45-59 (\$51.79) and 60-64 (\$121.03) age groups reaching statistical significance ($p < 0.05$).

Although enrollment in the Health Connect 360 sample was not associated with changes in the likelihood of having an ER visit, decreases in adjusted net ER related paid costs were observed in the Health Connect 360 sample overall (\$50.20, $p < 0.05$) and in the 45-59 and 60-64 age groups (\$88.62 and \$113.37 respectively, $p < 0.05$).

The increase in percentage of primary care physician visits in the 45-59 age group contributed to a net increase in adjusted net paid costs of \$66.13 for PCP visits ($p < 0.05$).

FIGURE 3: Adjusted difference in PCP, ER and inpatient hospitalization costs (PMPY) between Health Connect 360 and control groups*



* $p < 0.05$ represented by bold results

CONCLUSION

This study seeks to assess the impact of Health Connect 360 on health care cost and utilization, compared to clients in a control group that did not implement the Health Connect 360 approach. Overall, the report suggests that Health Connect 360 was associated with **decreased overall likelihood of inpatient hospital utilization**, and contributed to a **significant decrease in ER, inpatient hospitalization and overall net medical costs**.

METHODOLOGY

A retrospective analysis using a matched case/control study design was conducted comparing pre-and post-period health care costs and utilization. The analysis compared payer medical and pharmacy data for members that were enrolled in Health Connect 360, to payer data for those members whose employer or health plan was not enrolled.

The study time periods used for this assessment included calendar years 2019 and 2020, with the case/control design balancing out all external environmental conditions. Differences in outcomes between the case and control samples are highlighted in bold if they reach statistical significance (p value <0.05), which denotes a 95% probability that there is a difference in outcomes between the two samples.

Who we analyzed

Members in the Health Connect 360 group were selected if their employers or health plans were enrolled in RationalMed® (an Express Scripts PBM coordinated care and patient safety solution) in 2019 and then added Health Connect 360 in January of 2020. Members in the Health Connect 360 sample were included in the study if they were less than 65 years of age and continuously eligible for the entire study period.

Control clients were selected based on continuous enrollment in RationalMed for the entire study period (CY2019 and CY2020). Members from the control sample were also included if they were less than 65 and continuously eligible. In order to minimize the impact of members with catastrophic health costs on outcomes, outliers that fell in the top 1% of the total health care cost distribution were removed.

Members in the Health Connect 360 and control samples were matched based on age, gender, Charlson Comorbidity Index¹ and pre-period total health care cost using a greedy matching algorithm. The Health Connect 360 and control samples consisted of 40,233 and 40,230 members, respectively. Health Connect 360 member samples by age breakouts were: 0-14 years (n = 7,545 18.8%), 15-29 (n = 8,347 20.7%), 30-44 (n = 9,161 22.8%), 45-59 (n = 12,180 30.3%) and 60-64 (n = 2,970 7.4%). Overall member demographics (i.e., age and gender) were comparable across the Health Connect 360 member and control samples (Table 1).

TABLE 1: Sample comparison between demographics and other variables

	Health Connect 360 n = 40,233			Control n = 40,230			p
	Mean Pre	Median	Std Dev	Mean Pre	Median	Std Pre	
Age	34.78	38.00	18.29	34.78	38.00	18.29	0.9888
% Male	51.0%	N/A	N/A	51.0%	N/A	N/A	0.9974
Average Charlson Comorbidity Index	0.19	0.00	0.50	0.19	0.00	0.51	0.9916
Average Pre-Period Prescription Cost	\$547.42	\$0.00	\$2,126.97	\$470.40	\$0.00	\$1,910.34	<0.0001
Average Pre-Period Medical Cost	\$697.15	\$93.43	\$2,136.48	\$775.25	\$82.20	\$2,402.74	<0.0001
Average Pre-Period Total Health Care Cost	\$1,244.57	\$173.77	\$3,179.13	\$1,245.65	\$173.58	\$3,181.88	0.9615
PCP Visits	2.967	2.000	3.638	2.999	2.000	3.618	0.2619
ER Visits	0.125	0.000	0.435	0.162	0.000	0.505	<0.0001
Inpatient Hospitalizations	0.016	0.000	0.176	0.017	0.000	0.240	0.4507

What we measured

Pre- and post-period cost and utilization were assessed for primary care providers (PCP), emergency room (ER) and inpatient visits. Medical cost was defined as the paid amount for all services and procedures conducted during the PCP or ER visits or inpatient hospitalization. Prescription cost was defined as the plan cost of the medication. Medical utilization was calculated as the average number of PCP or ER visits or inpatient hospitalizations. We compared the before and after differences between the two groups to assess the net effect of the program.

We examined the impact of the program across age groups; members were categorized into one of five age groups (0-14, 15-29, 30-44, 45-59 and 60-64) based on their age as of January 1, 2020. Statistical comparisons were made using difference-in-difference (DID) measurements to compare the net change in outcomes between the Health Connect 360 and control samples before and after. The impact of Health Connect 360 on continuous study DID outcomes was assessed using a generalized linear regression model, controlling for all independent variables, including age, gender, Charlson Comorbidity index and pre-period cost or utilization. Negative binomial regression models were used to assess the impact of Health Connect 360 on the number of facility visits (PCP, ER and IP), controlling for all independent variables. Incidence rate ratios (IRRs) were reported for all facility visit count outcomes.

References

1. Charlson M, Wells MT, Ullman R, King F, Shmukler C. The Charlson comorbidity index can be used prospectively to identify patients who will incur high future costs. PLoS One. 2014 Dec 3;9(12):e112479. doi: 10.1371/journal.pone.0112479. PMID: 25469987; PMCID: PMC4254512.

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