Preliminary Observational Analysis of Digital Health Platform Associated with Medical Cost Changes in Employer Population

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BACKGROUND

Chronic conditions such as diabetes, hypertension, and obesity significantly burden healthcare systems and employer health plans. Digital health programs have emerged as scalable interventions, however real-world evidence on cost impact and care utilization remains limited.

OBJECTIVE

To evaluate the effect of Dario, a digital health platform addressing multiple chronic conditions on healthcare costs and utilization patterns across an employer-insured population, with a focused analysis on high-risk cohorts.

METHODS

A retrospective paired sample of 613 Dario members, pre-post enrollment analysis was conducted for 13 months (January 2024 to January 2025 inclusive). Analysis included per-member per-month (PMPM) changes in medical paid dollars based on claims, by service type and risk sub-groups (Elixhauser comorbidities, Diabetes type) using Wilcoxon signed-rank test for statistical significance.

RESULTS

The Dario digital health platform was associated with a significant reduction in medical costs ($119 PMPM at $p < 0.05$) (Figure 1). Inpatient PMPM paid dollars declined by $189 PMPM, while home-based care expenditures increased modestly by $11.5 PMPM, indicating a strategic shift toward lower-acuity care.

In members with Type 2 diabetes (N=132) medical costs were reduced by $600 PMPM ($p<0.05$), with inpatient costs decreasing by $829 PMPM, highlighting the impact on high-burden metabolic conditions.

Members with concurrent comorbidities of diabetes, hypertension, and obesity (N=52) showed the most substantial total cost decrease ($1,785 PMPM $p < 0.05$; inpatient decreased $2,458 PMPM), underscoring potential benefits among individuals with multiple chronic conditions.

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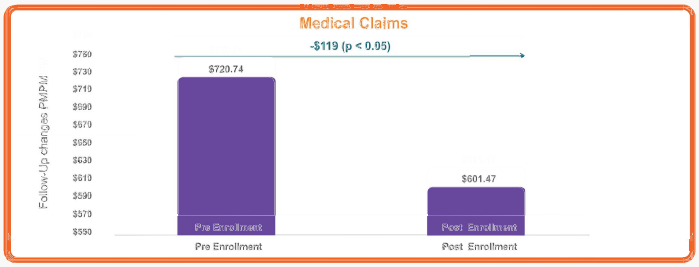

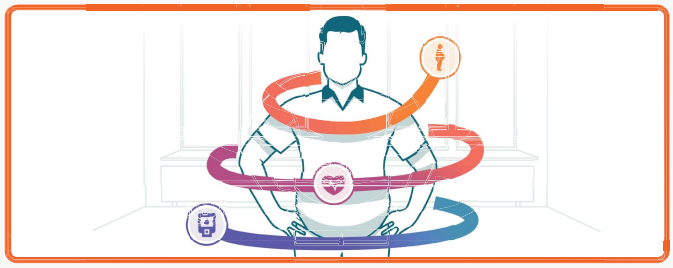

Figure 1: Follow-up medical claims changes in members at 13 months.

DISCUSSION

In this retrospective study members who utilized Dario platform incurred significantly lower cost of medical claims post enrollment. Previous systematic reviews of digital health interventions found that many generate cost savings by reducing waste, unnecessary utilization, and optimizing chronic disease care delivery [1]. The total reduction in medical claims was $119 PMPM, aligning with findings from a digital Diabetes Prevention Program (DPP) that demonstrated a $1,169 reduction in all-cause healthcare costs per participant over one year ($97 PMPM) [2]. Far larger savings in comorbid groups (e.g. −$1,785 PMPM) make sense because high-risk, high-utilization members typically provide more “room” for cost offset. It was observed previously that across all conditions, adherent members experienced significantly lower costs than non-adherent patients, with annual per-person savings of $7,823 for congestive heart failure, $3,908 for hypertension, and $3,756 for diabetes [3]. Proven chronic disease interventions can be cost-effective. Chronic diseases are the leading causes of illness, disability, and death in the United States. They are also the leading drivers of our nation's $4.9 trillion in annual health care costs. Ninety percent of the nation's $4.9 trillion in annual health care expenditures are for people with chronic and mental health conditions [4]. "Cost-effectiveness" recognizes that the cost of the intervention is worthwhile in terms of longer life and better quality of life [5].

CONCLUSIONS

This observational study demonstrated significant reductions in medical costs, particularly among high-risk populations. The observed shift from inpatient to home-based care aligns with the digital health platform’s focus on member self-monitoring and on supporting more efficient care delivery with potential cost savings. Further evidence will be generated to confirm these preliminary findings.

References

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