

Association of Use of the Integrated Specialty Pharmacy Model on Total Healthcare Cost

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Summary



Shields Health Solutions (SHS) partners with health systems to implement and develop health system specialty pharmacies focused on improving adherence, time to therapy, and medication access.



Integrated Specialty Pharmacies have shown improved patient outcomes but have yet to show total cost of care reductions across multiple health systems.



This actuarial study analyzed health insurance claims for members taking a specialty drug in 6 different disease states.



Using CMS-HCC risk adjustment, members utilizing a SHS-affiliated integrated specialty pharmacy had 13% lower risk adjusted total healthcare costs than members not utilizing an SHS integrated specialty pharmacy.

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Background

Shields Health Solutions Background:

- ❖ Shields Health Solutions (SHS) partners with health systems to implement and develop integrated specialty pharmacies focused on improving adherence, time to therapy, and medication access.
- ❖ The SHS integrated specialty pharmacy model is designed to coordinate care and provide comprehensive services for patients with the goal of improving health outcomes and reducing healthcare costs.
- ❖ Embedded directly within the health system, the integrated specialty pharmacy has access to patients' medical histories, lab results, and most recent visit notes, which allows the pharmacy to have a more comprehensive view of patients' health to thereby provide interventions that improve clinical outcomes.
- ❖ A network of integrated specialty pharmacies, has to date not been able to evaluate if their combined integrated pharmacy offering can reduce total healthcare costs for health plan members.

Study Background:

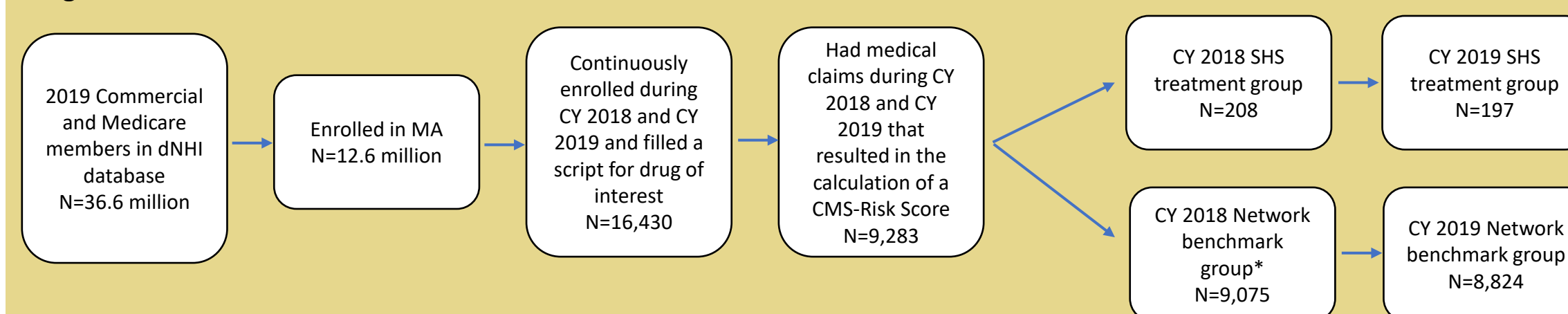
- ❖ This actuarial study analyzed medical and pharmacy claims to assess whether the use of a SHS integrated specialty pharmacies are associated with a reduction in the total healthcare cost of the patients it serves.
- ❖ The standard actuarial method of using CMS-HCC (Centers for Medicare & Medicaid Services Hierarchical Condition Categories) risk scores for normalizing cost and utilization data were employed in the study to evaluate the association of use of an integrated specialty pharmacy and total healthcare cost from a health insurance perspective.
- ❖ CMS-HCC risk scores are commonly used to estimate future medical expenditures and better align with the methods used by health insurance companies to analyze, trend, and forecast medical and pharmacy claims than matching techniques commonly used in clinical studies.



Methods

- ❖ Optum's proprietary de-identified Normative Health Information (dNHI) database was used as the data source for this retrospective cohort study.
- ❖ The dNHI database contains insurance claims, membership, and provider data for more than 100 million active members.
- ❖ Using dNHI, 2018 and 2019 medical and pharmacy claims were extracted for Medicare Advantage (MA) members.
- ❖ MA members were identified for study inclusion based on the following criteria:
 1. Member must have had both medical and pharmacy insurance coverage from January 1, 2018 to December 31, 2019.
 2. Member must have filled at least 1 prescription in 2018 for a self-administered specialty drug in selected disease states: oncology, inflammatory, cardiovascular, multiple sclerosis, transplant, and HIV.
- ❖ Members using a SHS-affiliated pharmacy (across 14 health systems) were assigned to the SHS treatment group, and the remaining members were assigned to the benchmark group (Figure 1).

Figure 1



- ❖ The primary outcome measure was the total cost of care (pharmacy + medical) on a per member per month (PMPM) basis.
- ❖ Secondary outcome measure included medical costs split by inpatient, outpatient, physician, skilled nursing facility (SNF), emergency department (ED), medical Rx, and outpatient categories.
- ❖ Cost and utilization metrics were calculated on a risk-adjusted basis using CMS-HCC risk score methodology.

$$\text{CMS-HCC Adjusted Cost} = \frac{\text{Total Cost}}{(\text{Patient Months} * \text{CMS-HCC Risk Score})}$$

$$\text{CMS-HCC Adjusted Utilization} = \frac{\text{Total Utilization}}{(\text{Patient Months} * \text{CMS-HCC Risk Score})}$$

- ❖ Two-tailed t-tests were performed on the primary and secondary outcome metrics using a statistical significance level of $\alpha=0.05$.



Results

Figure 2

2018 Baseline Year Risk Adjusted Healthcare Costs: Shields vs Network

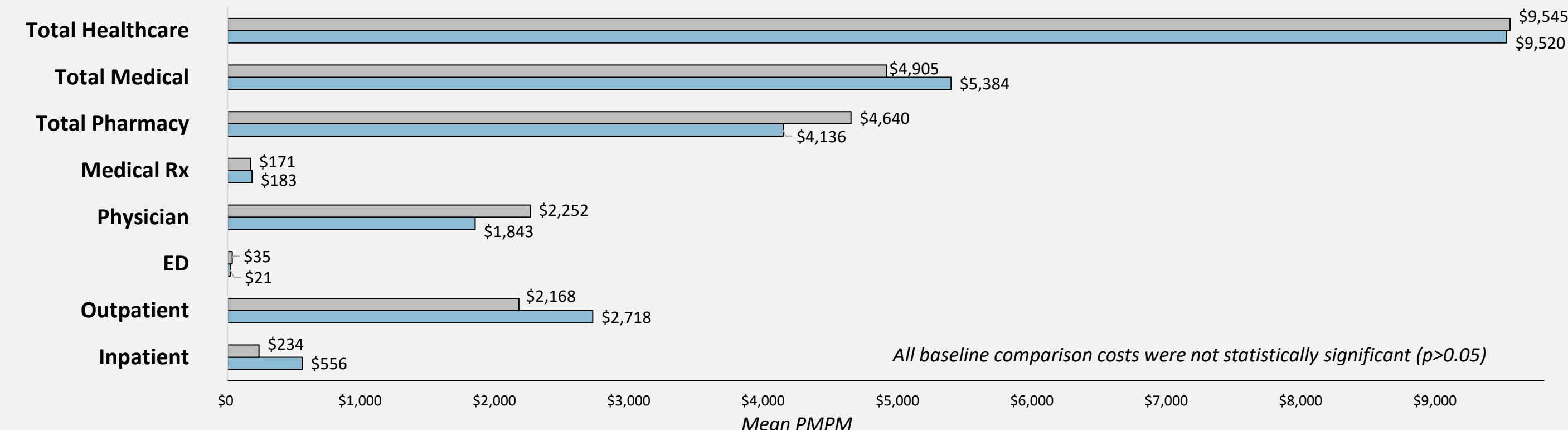
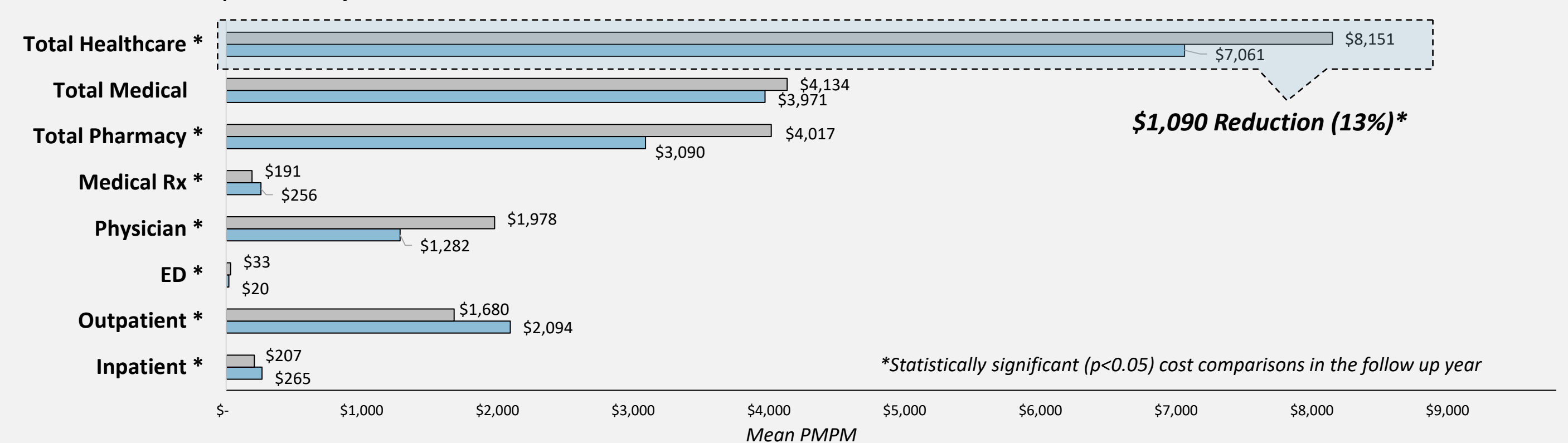


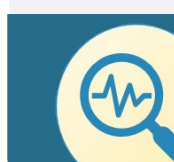
Figure 3

2019 Follow Up Year Risk Adjusted Healthcare Costs: Shields vs Network



- ❖ In the 2018 baseline period, there was no statistically significant difference in risk-adjusted cost (Figure 2).
- ❖ The 2019 risk-adjusted total healthcare cost per member per month (PMPM) for the treatment group approximately \$1090 lower (13% reduction) than the benchmark group with a p-value of 0.03 (Figure 3).
- ❖ The treatment group was found to be lower in the cost subcategories of emergency department (ED), physician, and pharmacy but had higher costs in the inpatient, outpatient, and medical pharmacy subcategories (Figure 3).
- ❖ In terms of risk-adjusted utilization per 1,000 members per year (PTMPY), the treatment group had a statistically significant lower number of outpatient visits, ED visits, and physician visits while having a higher number of inpatient visits at $\alpha=0.05$.

The results suggest that exposure to an integrated specialty pharmacy model is associated with a reduction in healthcare cost for members utilizing specialty drugs in the selected disease states.



Limitations

- ❖ The analysis was limited to the MA population only. Results should not be extrapolated to the commercially insured population.
- ❖ The data was not assessed for potential outliers.
- ❖ The small sample size of the SHS treatment group resulted in a lack of credibility with any disease state-level analysis.



Conclusions

- ❖ The analysis suggests that continued use of an integrated specialty pharmacy was associated with a lower total cost of care for MA members using a self-administered drug in the selected disease states.
- ❖ The variety of health system integrated specialty pharmacy operating models highlights the need for additional research.
- ❖ Recommended next steps include repeating the analysis with the use of 2020 data. The inclusion of the additional year of data will result in a larger SHS-affiliated member sample and allow for further analysis and validation of the observed cost and utilization trends.
- ❖ In addition, further analysis into specific disease states is needed to understand any emerging trends and whether the mix of drugs dispensed at specialty pharmacies impacts the average pharmacy cost and overall healthcare costs for patients.

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Disclosures:
SH and JD: OptumInsight, Pharmacy Advisory Services
DF and BS: Shields Health Solutions