

Summary

- Health-System Integrated specialty pharmacies have the potential to improve patient care through EMR access and direct care coordination with the prescriber
- Shields studied total health-care costs for oncology patients using an integrated specialty pharmacy versus non-integrated specialty pharmacy
- We found \$911 PMPM Less Medical Expense and for Specialty Oncology Patients Studied after Normalizing for Patient Risk
- Further study is warranted to identify oncology diagnosis and therapeutic cohorts most associated to savings

Background

- Specialty Pharmacy patients contribute disproportionately to healthcare costs now representing >50% of pharmacy spend, and oncology specialty pharmacy patients have been shown to comprise 18.3% of total specialty pharmacy spend and growing¹
- Health System Integrated Specialty Pharmacies have shown improved outcomes²⁻⁴ and medical expense for specialty patients⁵ yet are predominately prevented (“Locked Out”) of restricted networks, preventing care model benefits^{3,4} to sponsors and payors
- Shields Health Solutions partners with Health-Systems to offer an integrated specialty pharmacy program. The care model includes patient risk stratification to drive engagement, board certified clinical pharmacists, full EMR integration, clinical technology platform TelemetryRx (standardizing workflows), and clinic embedded liaisons to provide adherence management and enhanced onboarding
- Patients with prescribers participating in the care model in clinic, and filling with the integrated health system pharmacy on-going, are hypothesized to receive the greatest benefit from the integrated care model
- Pharmacist engagements, interventions, in-clinic liaison coordination, and integration into the specialty prescribing clinic is hypothesized to improve claims cost



Methods

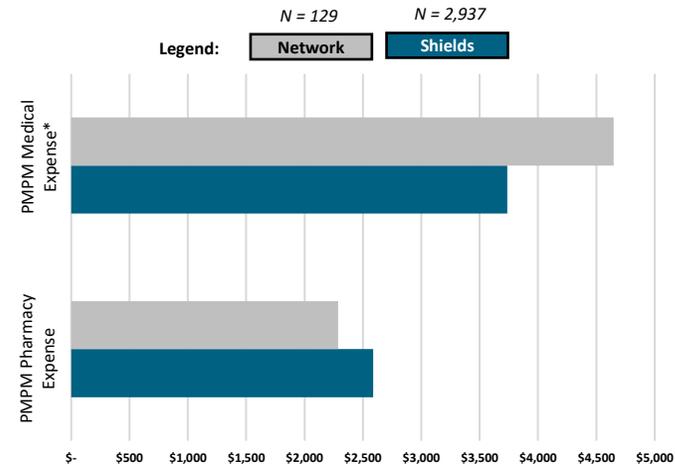
- Shields partnered with a large national health insurer to investigate Medicare Advantage member claims associated with the Shields oncology care model vs a national benchmark
- National health insurer de-identified Normative Health Information database (dNHI) was used to identify members filling a self-administered specialty oncology medication at a Shields Health System Pharmacy in 2018 from a prescriber integrated in the care model, and was refined to only include members with continuous coverage over 2018 and 2019
- Integrated Specialty Pharmacy patients are compared to “Network” Patients representing oncology specialty pharmacy patients using pharmacies in the same geographic area but not associated to the Shields Care model by provider or filling pharmacy
- The primary outcome is per member per month (PMPM) mean medical and pharmacy benefit cost
- Secondary outcome measures were healthcare utilization measured per member per year (PMPY)
- The standard actuarial method of using CMS-HCC (Centers for Medicare & Medicaid Services Hierarchical Condition Categories) risk scores for normalizing cost and utilization data was employed:

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

$$\text{CMS-HCC Adjusted Utilization} = \frac{\text{Total Utilization}}{\text{Patient Months} * \text{CMS-HCC Risk Score}}$$
- Two-tailed t-tests were performed on the primary and secondary outcome metrics using a statistical significance level of $\alpha=0.05$.
- All cost and utilization comparisons between Network and Shields groups were not statistically significant in the baseline year, costs and utilization were reviewed in the follow up year

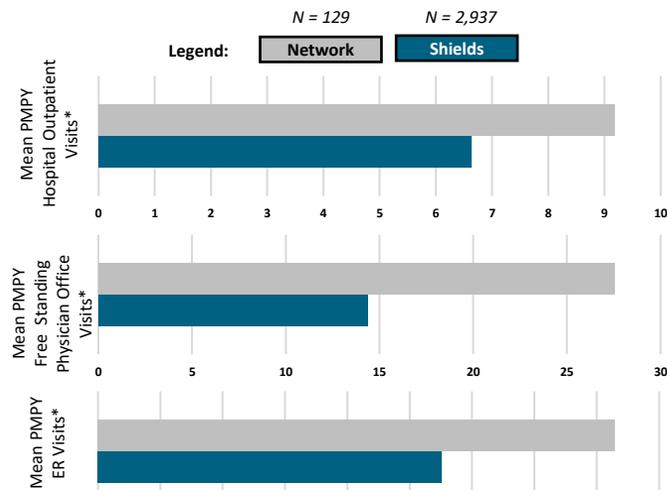
Results

Primary Outcome: Follow Up Year Risk Adjusted Cost



*Statistically Significant p <0.05

Secondary Measures: Follow Up Year Risk Adjusted Utilization



*Statistically Significant p <0.05

Conclusion

- The integrated specialty pharmacy care model was associated with \$911 PMPM (p<0.05) improvement in total medical expense, impacted by reduced hospital outpatient visits, free standing physician office visits, and ER visits
- There was a non-significant increase of \$299 PMPM (p=NS) in total pharmacy expense potentially due to improved medication persistency

Limitations

- Identified Members via pharmacy and provider NPI rather than Clinical Data from Shields TelemetryRx or Health System EMR, prevents further normalization analysis (particularly oncology stage matching)
- Small sample size limitations within the dNHI prevented oncology diagnosis cohort analysis
- Analysis focused on CMS-HCC normalization as a generalizable standard used to inform Medicare premiums as well as normalize costs

Discussion

- First in-kind multicenter analysis of a standardized integrated specialty pharmacy care model to show improved oncology total medical expense adjusting for risk with an actuarial generalizable standard
- Repeating analysis with greater sample sizes and integrated clinical data can improve normalization and allow for therapeutic and diagnosis cohort analysis
- Statistical techniques (propensity score matching or inverse probability weighting with difference in difference analysis) may further control for observable and unobservable characteristics

References

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