Pharmacist Interventions in Specialty Pharmacy

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Background

- Shields Health Solutions partners with Health-Systems to offer an integrated specialty pharmacy program. The care model includes patient risk stratification, board certified clinical pharmacists, full EMR integration, a clinical patient management platform (PMP) to standardize workflows, and clinic embedded liaisons to provide adherence management and enhanced onboarding of patients.
- The integrated care model includes in-clinic and centralized clinical pharmacists to provide medication therapy management (MTM) through patient engagements and intervene with the provider to proactively mitigate drug-drug interactions, address adherence concerns, and offer side effect management while optimizing the patient care plan.
- The objective is to evaluate the likely outcome of pharmacist interventions across all disease states within health system specialty pharmacies and quantify the cost avoidance associated with the intervention.

Methods

- This was a retrospective, observational study that captured pharmacist interventions for patients on specialty medications from 1/1/2020 to 12/31/2020 across 26 health system specialty pharmacies and who were enrolled into the clinical program.
- The integrated specialty pharmacy model focused on a range of disease states including infectious diseases, inflammatory conditions, oncologic, cardiology, bleeding disorders and others.
- Standardized clinical outcomes were selected for all disease states within the PMP to document the outcome of the pharmacists’ clinical interventions.
- These standardized clinical outcomes were matched to cost avoidance figures reported in the literature to calculate total cost avoidance.

Results

Standardized clinical outcomes are seen in Table 1 and were available within the PMP for the pharmacist to select when determining the likely outcome of the intervention(s). Overall intervention type and overall acceptance rate are seen in Figure 1. The top 5 therapeutic categories with the most interventions, and associated cost avoidance, are seen in Figure 2.

### Table 1. Standardized Clinical Outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Cost Avoidance ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elimination of duplicative therapy</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>Elimination of drug interaction</td>
<td>$4,000,000</td>
</tr>
<tr>
<td>Elimination of therapy inappropriateness</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>Potentially improved therapy adherence</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>Prevented adverse drug reaction</td>
<td>$1,000,000</td>
</tr>
</tbody>
</table>

* Indicates one of the top 5 outcomes reported across all disease states

### Figure 1

**Intervention Types**

- Physician: 53.0%
- Patient: 44.8%
- Other HCP: 2.2%

**Acceptance Rate:**

- 95.2%

**Interventions**

- Prevented a serious adverse drug reaction
- Reduced side effect challenges
- Potentially improved therapy adherence
- Reduction in medication dosage
- Reduction in drug wastage

### Figure 2

**Top 5 Therapeutic Categories**

1. Oncology
2. Rheumatoid Arthritis
3. HIV
4. Hepatitis C
5. Rare Inflammatory Conditions

**Number of Interventions**

- Oncology: 2,819
- Rheumatoid Arthritis: 743
- HIV: 529
- Hepatitis C: 484
- Rare Inflammatory Conditions: 282

**Cost Avoidance**

- Oncology: $5,684,405
- Rheumatoid Arthritis: $1,496,593
- HIV: $1,128,832
- Hepatitis C: $831,922
- Rare Inflammatory Conditions: $754,683

Conclusions

- Interventions were part of the clinical pharmacist standard workflow to ensure patients have the knowledge they need to handle and administer their medications safely while addressing optimal disease state management.
- An integrated health system specialty pharmacy with pharmacist-led interventions is associated with favorable clinical and economic benefits that can improve patient care, mitigate total medical expenditures, and support delivery of quality care with a total cost avoidance of $15,292,883 across all disease states.

References


Disclosures

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.