Using Data to Support Your Optimization Efforts
A Medication Reconciliation Journey
Marci Denn, MS RN-BC, Bonnie Williams, RN BSN
Baptist Health, Jacksonville FL

Background
Implementation of technology to assist in the medication reconciliation process brought on a new set of challenges for clinicians and physicians at Baptist Health. Despite full automation of the process, pharmacy reported frequent intervention, physicians expressed dissatisfaction with the process and frequent errors were noted on patient discharge instructions. The five facility health system, undertook a data-driven approach to resolving the issues and to improve the overall usefulness and quality of clinical information used in the medication reconciliation process.

Results

**Increase In Documentation Compliance of Complete Medication History**

<table>
<thead>
<tr>
<th>% of Medication History and Reconciliation Completion</th>
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</thead>
<tbody>
<tr>
<td><strong>Beaches Aug -11</strong></td>
</tr>
<tr>
<td><strong>Complete History Defined:</strong></td>
</tr>
<tr>
<td>- Dose, Route, Frequency and Compliance with each medication addressed</td>
</tr>
<tr>
<td>- All prior prescriptions completed or moved to home medication list</td>
</tr>
<tr>
<td><strong>Source:</strong> System Audits of all Inpatients Discharged in a 2 week Period by Facility</td>
</tr>
</tbody>
</table>

**Decrease in % of Medication Errors on Discharge Instructions**

<table>
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<th>Duplicate Medications</th>
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<td><strong>Errors Defined:</strong></td>
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<td>- Duplicate medications or a missing dose, route, frequency on any medication listed on the discharge patient instructions</td>
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<td><strong>Source:</strong> Chart audits of random sample of patients discharged in a 2 week period prior to and after implementing action plan N=100 patients per facility</td>
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Initial Findings

% of Medication History and Reconciliation Completion

Initial data and observations indicated that an incomplete and/or inaccurate medication history was the most significant contributor to the challenges of reconciling the medications, and contributed to discrepancies on patient discharge instructions.

Methods

- Qualitative and quantitative data driven approach to analyze root cause
- Rapid cycle action plan developed by a collaborative team of nurses, pharmacists and physicians to address issues learned from a multi-faceted root cause analysis
- Communication and engagement plan focused on sharing current data, highlighting its impact to patient safety
- Real time system data provided to front line clinicians identifying errors and omissions allowing intervention prior to discharge
- Drill down data of compliance by clinician/provider
- System optimization around medication reconciliation functionality identified and implemented
- Engagement at the executive, management and front line staff and provider level

**System Enhancements- Auto Conversion Rate of Home Medications to Inpatient Medications**

**Conclusion**

Data was an effective tool to accurately identify and quantify contributing factors to clinical processes and system issues. Real-time presentation of the data helped to identify errors and omissions which gave the clinicians the ability to provide complete clinical information to improve the medication reconciliation process and decrease potential errors in medication management. Retrospective reporting tools enhanced monitoring of progress and sustainability of success by targeting outliers and furthered improved adoption.

**Lessons Learned**

- A well defined process may not be the common experience
- Consideration for the "what if" scenarios needs to be taken
- Adoption does not occur at the same time and complacency may exist
- Ownership and accountability of the front line staff results in improved compliance
- Lack of compliance may indicate larger problem with utilization of technology
- Data can be used in multiple facets and at various times to improve processes

**Contact Information**

Marci Denn, MS RN-BC
MDenn@elevatinginformatics.com
Bonnie Williams, RN, BSN
Bonnie.Williams@bmcjax.com

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