Impact of ‘Meds to Beds’ Program in Reducing 30-Day Readmissions for CHF and AMI Patients

BACKGROUND
Medication reconciliation is a necessary element for safe transitions of patients across the care continuum. Approximately 50% of medication errors occur at the time of discharge. Post discharge medication adherence and compliance is a necessary component to reduce medication errors, promote safe discharge, and reduce avoidable readmissions.

The ‘Meds to Beds’ program is a bedside medication delivery service which facilitates timely resolution to the problem of prior authorizations and improves medication reconciliation resulting in positive health outcomes.

The Transition of Care Team promoted and expanded the utilization of the program across the hospital with the goal of promoting patient safety.

PROJECT AIM
Increase utilization of ‘Meds to Beds’ by 20% and study its impact on CHF/AMI readmissions

METHODOLOGY
- Plan
  - Evaluate prescription delivery process
  - Eliminate medications access barriers
- Do
  - Track and document changes
  - Share results with stakeholders
  - Embed and scale hospital discharge processes
- Study
  - Enrollments
  - Prescriptions utilization
  - Readmission rates

PROJECT AIM
Increase utilization of ‘Meds to Beds’ by 20% and study its impact on CHF/AMI readmissions

RESULTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Patients</th>
<th>Scripts Filled</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>707</td>
<td>1,802 scripts</td>
</tr>
<tr>
<td>2017</td>
<td>937</td>
<td>2,544 scripts</td>
</tr>
</tbody>
</table>


CHF/AMI Discharges (2017)  
Readmitted Patients  
Non Readmitted Patients  
Total

<table>
<thead>
<tr>
<th>Population</th>
<th>Meds-To-Beds</th>
<th>Non Meds-To-Beds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Readmit Type</td>
<td>11</td>
<td>6.29%</td>
<td>135</td>
</tr>
<tr>
<td>% of Readmit Type</td>
<td>164</td>
<td>93.71%</td>
<td>882</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
<td>1,192</td>
</tr>
</tbody>
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By using the Chi-Square test, the study results demonstrated statistical significance with a p-value = 0.0092, \( \chi^2 = 6.784 \), and \( \alpha = 0.05 \)

CONCLUSION

The program was successful in increasing hospital wide utilization by over 20%. Patients enrolled in the program were half as likely to be readmitted as those who didn’t participate. Utilizing the program showed secondary endpoints including improving patient satisfaction, reducing post hospital medication errors and decreasing medication non adherence.

POTENTIAL FINANCIAL IMPACT

Under the assumption that the AMI-CHF ‘Meds to Beds’ readmission rate is held constant to all AMI and CHF patients, 85 readmissions could have been potentially prevented which had a financial impact of $722,500 cost savings ($8,500 * 85 readmissions).

NEXT STEPS

- Expand the hours of operation for both Pharmacy Advocate and retail pharmacy to 7 days and offer home delivery services
- Patients are automatically enrolled into the program at the time of admission through Cerner
- Improve communication capabilities for all providers using Tiger Text to coordinate the discharge of a patient

REFERENCES


* Exclusions Criteria: Patients discharged/transferred to facilities other than home

* Assumes an average readmissions cost $8,500 per Medicare and Medicaid data

Readmission Rates for AMI & HF Population

<table>
<thead>
<tr>
<th>Readmission Rates (%)</th>
<th>AMI-HF Meds-To-Beds Readmission Rate</th>
<th>AMI-HF Non-Meds-To-Beds Readmission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-Mar 2017</td>
<td>10.00%</td>
<td>8.51%</td>
</tr>
<tr>
<td>Apr-Jun 2017</td>
<td>11.16%</td>
<td>8.67%</td>
</tr>
<tr>
<td>Jul-Sep 2017</td>
<td>16.67%</td>
<td>11.43%</td>
</tr>
<tr>
<td>Oct-Dec 2017</td>
<td>17.12%</td>
<td>17.50%</td>
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</tbody>
</table>

41.2% Annual Increase in Scripts Filled

32.5% Annual Increase in Patient Engagement

Analysis of readmission rates for AMI and HF populations.