Reducing Readmission Rates by Providing a Comprehensive Transition Plan from Hospital to Home for Cardiac Surgery Patients

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Background

Studies nationwide have shown that patient readmissions to the hospital after cardiac surgery can be as high as 21%, which results in increases in health care expenditures and decreases patient satisfaction.

Objective

This study aims to reduce 30 day readmission rates for post-operative cardiac surgery patients that are identified at risk for readmission by using a Readmission Risk Screening Tool and having a Risk Screening score greater than or equal to 4.

Methods

Study team RN or NP screens patient s/p cardiac surgery upon admission to Cardiovascular Progressive Care Unit (CVPCU) and combined CAB + Valve

Cardiac surgery experienced NP will perform a home health visit to patient 3-5 days post discharge to assess status and complete Post Discharge Checklist

Study team RN or NP monitors for patient readmission to hospital via CRISP (Chesapeake Regional Information System for our Patients) and/or post-op follow-up with cardiac surgery

Inclusion Criteria:
• ≥ 18 years old
• Admitted directly to the CVPCU after cardiac surgery
• Cardiac surgery procedures: coronary artery bypass graft (CABG), valve replacement, aortic aneurysm repair, and combined CABG and valve procedures.
• Resides in the state of Maryland
• Able to provide informed consent
• Readmission Risk Screening Tool score ≥ 4

Readmission Risk Screening Tool

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Points Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>2</td>
</tr>
<tr>
<td>Chronic Lung Disease</td>
<td>2</td>
</tr>
<tr>
<td>EF ≤ 30%</td>
<td>3</td>
</tr>
<tr>
<td>Endocarditis</td>
<td>3</td>
</tr>
<tr>
<td>Public Health Insurance</td>
<td>2</td>
</tr>
<tr>
<td>Combined CAB + Valve Procedure</td>
<td>3</td>
</tr>
<tr>
<td>Non-STS Index Procedure</td>
<td>2</td>
</tr>
<tr>
<td>Discharge on Coumadin</td>
<td>2</td>
</tr>
<tr>
<td>Discharge hemoglobin &lt; 8</td>
<td>2</td>
</tr>
<tr>
<td>Maximum Possible Score</td>
<td>21</td>
</tr>
</tbody>
</table>

Results

Number of patients screened with the Readmission Risk Screening Tool = 794 (between July 2016 – June 2017)

Current number of participants = 122 (as of June 2017)
• Study = 64
• Control = 58

Average days from DC to readmit = 9
Average time of home visit = 50.96 min

Average risk score for participants = 5.04

Conclusions

As of mid-June 2017, there have been 122 patients consented into the study. Using the CRISP database, 12 were readmitted.
• 41% of readmissions occurred between 1-7 days after DC
• 42% of readmissions occurred between 8-14 days after DC
• 17% of readmissions occurred between 15-30 days after DC

It should be noted that during NP home visits, the visiting NP determined that 3 patients required hospitalization and were directly readmitted as a result.

Interventions aimed at monitoring critical patients within the first 14 days after DC may be important in preventing the readmission of cardiac surgery patients.

Future Directions

This study is on-going. Data collection will continue until at least 400 participants have been consented and randomized as a study and control participant. Conclusions will be finalized at the completion of the study.

References


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