Utilization of a Nurse Practitioner and a Transitional Care Model in Hepatology Patients

The Problem
Limited research has been completed regarding early re-admission of patients with advanced liver disease.

Aim/Goal
The goal of the project was to evaluate the intervention of utilizing a nurse practitioner (NP) employing a transitional care model to potentially decrease readmission and mortality of hepatology patients discharged from the inpatient setting.

The Team
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- George Silva, BA, Decision Support Specialist II/ Senior Data Analyst, Center for Health Delivery Science
- Lauren Casazza, BS; Practice Coordinator, Liver Center
- Jane Balsamo, Practice Manager, Liver Center

The Intervention
Patients were seen by a NP specializing in Hepatology following their hospital discharge. NP discharge clinic transitional care included a standardized visit based upon The Naylor Transitional Care Model. The interventions include: 1) medical review of the patient; 2) medical reconciliation; 3) patient education.

A medical records review of patients seen in the Liver Clinic was conducted to identify rehospitalization and mortality risk for patients seen by NP and non-NP (MD) providers.

Research Questions
1. Does care provided by a specialized transition nurse practitioner reduce time to outpatient visit follow up?
2. Does care provided by a specialized transition nurse practitioner reduce patient rehospitalization?
3. Does care provided by a specialized transition nurse practitioner reduce patient mortality?

Results
Patients seen by a nurse practitioner providing transitional care were:
- seen earlier following discharge at scheduled follow up visits
- rehospitalized at similar rates when care was provided by NP and MD providers
- more likely to be alive one year following discharge

<table>
<thead>
<tr>
<th></th>
<th>Nurse Practitioner group (n=46)</th>
<th>No Nurse Practitioner group (n=45)</th>
<th>P – value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Length of Stay (LOS)</td>
<td>6.76 (6.01)</td>
<td>5.6 (7.72)</td>
<td>NS</td>
</tr>
<tr>
<td>Days to outpatient follow up visit</td>
<td>29.24 (30.45)</td>
<td>49.13 (93.97)</td>
<td>0.014</td>
</tr>
<tr>
<td>Days To readmission</td>
<td>42.96 (64.62)</td>
<td>42.93 (60.07)</td>
<td>NS</td>
</tr>
<tr>
<td>Number of readmissions/ year</td>
<td>2.07 (2.72)</td>
<td>1.78 (2.33)</td>
<td>NS</td>
</tr>
<tr>
<td>Readmitted within 30 days</td>
<td>9 (20%)</td>
<td>4 (9%)</td>
<td>NS</td>
</tr>
<tr>
<td>Readmitted within a year</td>
<td>28 (61%)</td>
<td>27 (60%)</td>
<td>NS</td>
</tr>
<tr>
<td>Readmitted seven or more times</td>
<td>4 (9%)</td>
<td>3 (7%)</td>
<td>NS</td>
</tr>
<tr>
<td>Expired within a year</td>
<td>0 (0%)</td>
<td>9 (20%)</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Lessons Learned
Transitional Care Model found to be useful in guiding the nursing intervention in the discharge clinic and may improve patient outcomes.

From this quality improvement project it appears that patients may be at greater risk for decompensation and readmission at time points outside of the CMS 30 Day Risk-Standardized Readmission Measure.

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