To Reduce the Readmission Rate of Heart Failure Patients

BACKGROUND

In Singapore, Heart Failure (HF) is the most common cardiac cause of hospitalization, accounting for 17 percent of all cardiac admissions. In 2015, public hospitals recorded in excess of 5,700 unique HF admissions. Heart failure is recognized as an emerging public health problem due to increasing hospitalizations, readmissions, and direct healthcare costs. An improved multidisciplinary care coordination in heart failure transitional care will help ensure discharge success. Our project target to reduce readmission of heart failure patients.

PRE-IMPLEMENTATION

Heart failures patients are typically admitted for fluid overload and given treatment to help them tide over the fluid overload stage. After 4 to 6 days of treatment and heart failure education, patients are discharged. The ward nurse will do follow-up call to patient the day following his/her discharge. The patients will then return to NHCS for their follow up appointment with the doctor 4-6 weeks after their discharge.

Current HF Patient Management

<table>
<thead>
<tr>
<th>Patient admitted for the treatment of HF</th>
<th>HF education teaching</th>
<th>Patient is discharged</th>
</tr>
</thead>
</table>

Between Nov 14 – Oct15, 8.4% of the heart failure patients were readmitted within 30 days, somewhere between the third to fourth week, before their appointment date to see Doctor. The data showed a rather consistent percentage of re-admission of heart failure patients.

<table>
<thead>
<tr>
<th>Time period</th>
<th>Nov/14 – Apr15</th>
<th>May/15 – Oct15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients admitted for heart failure</td>
<td>256</td>
<td>266</td>
</tr>
<tr>
<td>Number of patient who were readmitted within 6 months</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Number of first timers readmitted within 30 days</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>Percentage of patients who were readmitted within 5 months</td>
<td>15.6%</td>
<td>11.9%</td>
</tr>
<tr>
<td>Percentage of patients who were readmitted within 30 days</td>
<td>8.6%</td>
<td>8.1%</td>
</tr>
</tbody>
</table>

A Cause and Effect Diagram was used to analyze the roots causes. Six Root Causes were identified:

- Information given to HF patients are not specific to their needs
- Nurses attending to HF patients have different levels of knowledge
- There is no reminders given to patients
- Patients do not know the drug regime
- Next of Kin not given instructions

Solution Development Process

- Group Brainstorming
- Affinity Diagram to group ideas
- Idea exploration
- Stakeholders Engagement
- Sharing of possible ideas
- Address Stakeholders interest & concerns
- List possible solutions
- Determine Pros & Cons of each solution
- Solution matrix development

RESULTS

The number of patients re-admitting for heart failure had been reduced from 8.3% to 3.5% for re-admission within 30 days and from 13.6% to 5.8% for re-admission within 6 months.

Frees Up 215 Beds Each Year

The project led to an estimated Patient Hospital Cost Savings of $116,400 per annum!

Intangible Benefits

- Enhanced patients’ safety
- Improved patient & caregiver experience
- Enhanced organization’s image
- Increased work efficiency and job satisfaction
- Cross- department team work & collaboration

CONCLUSION

With the implementation of several interventions in this project, patients and next of kin are better informed about the importance of the post discharge care. We have taught the patients to be more responsible for their well-being by emphasizing on the importance of their lifestyle towards recovery. The implementation of the follow up calls has received a positive feedback from the patients and their next of kin as they could feel the sincerity of care from our staff.