Impact Of An Interactive Care Plan On Patient Activation In Heart Failure Inpatients

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What exactly is Patient Activation?

• As defined by Hibbard et al:
• “An engaged patient who demonstrates an understanding that actions determine health outcomes and that they have the confidence to institute change.”
Patient Activation

• Patient’s playing a more active role in their care and advocating for themselves
• Seeks to improve the following areas:
  – Health Literacy
  – Clinical Decision Making
  – Self Care
  – Patient Safety
Implications of Patient Activation

• Patients who are activated\textsuperscript{1,2}:
  – Participate in self-management behaviors
  – Have higher medication adherence
  – Have higher quality of life scores
  – Improved outcomes in patients with chronic conditions
Patient engagement: the critical catalyst to health reform in the USA
Background

• Heart failure (HF) is a serious chronic condition that requires significant self-care to manage effectively and reduce associated avoidable readmissions.

• The inpatient acute care setting provides ample opportunities to educate and engage patients in their care to increase patient activation and improve patient outcomes\(^2\).
Background

• Patient activation requires a demonstrated understanding of their condition, medications and lifestyle change requirements prior to being discharged from the hospital.
• Patient activation can be measured using the PAM survey
PAM

• The Patient Activation Measure (PAM)
  – Validated and reliable
  – Original 22-item survey, abbreviated 13-item survey
  – Assesses self-reported knowledge, confidence and skill for self-management of chronic disease
PAM Activation Levels

**Level 1**
Starting to take a role.
Individuals do not feel confident enough to play an active role in their own health. They are predisposed to be passive recipients of care.

**Level 2**
Building knowledge and confidence.
Individuals lack confidence and an understanding of their health or recommended health regimen.

**Level 3**
Taking action.
Individuals have the key facts and are beginning to take action but may lack confidence and the skill to support their behaviors.

**Level 4**
Maintaining behaviors.
Individuals have adopted new behaviors but may not be able to maintain them in the face of stress or health crises.

Heart Failure Interactive Care Plan

• 4-Phase Care Plan designed to better prepare patient to manage condition
• Nurse Activated
• Focus on understanding:
  – Condition
  – Signs/Symptoms
  – Medications
  – Lifestyle change
Interactive Care Plan: Phase 1

Nurse Activation
- Condition overview and literacy assessment

Pre-test Assessment
- PAM-13 Administered

First Wave of Educational Modules
- Comprehension tests and lesson overview
Interactive Care Plan: Phases 2-3

Nurse Activation
- Overview and plan for the day

Additional Educational Modules
- Comprehension tests and lesson overview
Interactive Care Plan: Phase 4

- Condition overview

Final Discharge

- Educational Modules
  - Comprehension tests and overview

Post-test Assessment
- PAM-13 Readministered
Objective

• To determine if the use of the Heart Failure Interactive Care Plan results in an improvement in PAM-13 scores during the course of hospitalization.
Study Subjects

• Inclusion Criteria
  – Patients 18 years and over with a primary diagnosis of heart failure (ICD-9 code 428.X) in hospitals utilizing GetWellNetwork

• Exclusion Criteria
  – Unable to demonstrate proficiency in literary assessment
Methods

• Pre-test post-test design
• Patient activation measured using the PAM-13
• Two-tailed paired t-test
  • Difference in pre-test v. post-test
Results

• 275 patients in total
  • Six participating hospitals
  • Six month time span
• An increase of 0.38 in levels of activation ($p < 0.001$) was seen after the implementation of the care plan.
Patient Activation Scores

**Pre-Intervention**

- **LEVEL 4**: 61.1%
  - Has made most of the necessary behavior changes, yet may have difficulty maintaining behaviors over time

**Post-Intervention**

- **LEVEL 4**: 77.8%
- **LEVEL 3**: 13.1%
  - Beginning to take action
- **LEVEL 2**: 6.2%
  - Lacks confidence and knowledge to take action
- **LEVEL 1**: 2.9%
  - May not believe that the patient role is important
Results

• When data were stratified to remove all patients with an initial activation level of 4, the remaining 107 patients showed an average improvement of 1.05 levels of activation (p < 0.001).
Results

• All-cause readmission rates were promising for one hospital site:

The Indiana Heart Hospital All-Cause Readmissions Trend
Further Analysis

• Gender and age were only available for a subset of the 275 patients that participated in the study (n=113).

• Males showed a generally higher level of activation at pre-test (3.34) compared to females (3.18), although the difference was not statistically significant.

• Both males and females demonstrated statistically significant increases in activation (p< 0.01).
Further Analysis

Description by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Pre-intervention</th>
<th>Post-intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50</td>
<td>3.5</td>
<td>3.8</td>
</tr>
<tr>
<td>50-59</td>
<td>3.28</td>
<td>3.74</td>
</tr>
<tr>
<td>60-69</td>
<td>3.28</td>
<td>3.67</td>
</tr>
<tr>
<td>&gt;70</td>
<td>3.32</td>
<td>3.62</td>
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</tbody>
</table>
Limitations

• Limited demographics were collected
  – Limitation of available technology and man-power
• Demographics were not complete
• Most patients in the study were already in the top activation level, pre-test
Future Research

- Future research includes analysis on patient activation and length of stay
- Further investigation of readmission rates, specific to heart failure
Conclusion

• Interactive patient-centered educational tools such as the Heart Failure Interactive Care Plan can be used to improve patient activation in heart failure inpatients.
Resources


QUESTIONS???