Reducing 30-day Readmissions in Nursing Home Residents with Heart Failure
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INTRODUCTION

- Heart failure (HF) is the leading cause of hospital admissions and readmissions among adults >65 years.1
- HF disproportionately affects nursing home (NH) residents because of the complex interplay of factors.2,4,6
- Social determinants of health (SDOH) cause a disparate increase in HF prevalence among low-income and ethnic minorities in NHs,5,6
- There is limited evidence that HF guidelines effectively reduce readmissions in the NH.

OBJECTIVES

- Determine the impact of a 12-week evidence-based HF protocol on 30-day readmissions
- Evaluate the effect of HF education program on the knowledge of the NH’s nursing staff
- Determine the feasibility of integrating a HF protocol into the NH’s standard of care

METHODS

- Design & Setting: Pre-post intervention at a Medicare and Medicaid certified NH in California
- Participants: RN and LVN employees; NH residents >65 years
- Intervention: HF protocol (Risk identification, weight monitoring, sodium restriction) and HF education program
- Measures: Readmissions, HF knowledge, Feasibility of intervention
- Analysis: Chi square, Wilcoxon signed-rank test, Descriptive statistics

RESULTS

- 34 NH residents (14 in pre-intervention and 20 in post-intervention)
- 8 Nursing staff
- Ages ranged from 68-98 years
- 58.8% White, 5.9% Black, 14.7% Asians, 11.8% Hispanics, 8.8% not specified

Readmissions were caused by a wide array of non-HF-related conditions.

Table 1: Pre- and Post-Intervention 30-day Readmission Rates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-Test n (%)</th>
<th>Post-Test n (%)</th>
<th>X²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-day Readmission Rates</td>
<td>Unadjusted 5 (35.7) 10 (50) .68 .409</td>
<td>Adjusted a 5 (35.7) 7 (35) .00 .966</td>
<td></td>
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</tbody>
</table>

Table 2: HF Knowledge Pre- and Post-Test Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-Test Mdn</th>
<th>Post-Test Mdn</th>
<th>Pre-Post Change Mdn</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF knowledge score</td>
<td>15 (1.81)</td>
<td>17 (1.39)</td>
<td>2 (.99)</td>
<td>.016</td>
</tr>
</tbody>
</table>

Table 3: Acceptability, Appropriateness, and Feasibility Rating of Intervention

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mdn</th>
<th>Mode</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>Acceptability</td>
<td>4.57</td>
<td>5.0</td>
<td>.53</td>
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<tr>
<td>Appropriateness</td>
<td>4.28</td>
<td>4.0</td>
<td>.49</td>
</tr>
<tr>
<td>Feasibility</td>
<td>4.03</td>
<td>4.0</td>
<td>.09</td>
</tr>
</tbody>
</table>

CONCLUSION

- HF-specific interventions, including weight monitoring and sodium restriction, do not have a substantial impact on readmissions.
- Racial disparities exist in NH readmissions.
- HF education is associated with significant improvement in HF knowledge of NH staff.
- The HF protocol is feasible for implementation in the NH.

IMPLICATIONS

- Future quality improvement projects need to:
  - Focus on broad interventions that encompass medical diagnoses, improve the overall care of older adults, and target SDOH to reduce readmissions.
  - Explore the impact of a tailored HF education on nursing assistants’ HF knowledge.

REFERENCES