Patient-Identified Factors Related to Heart Failure Readmission

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INTRODUCTION

• Following heart failure (HF) hospitalization, ~20% of patients will be readmitted within 30 days and ~50% within 6 months.
• Higher rates among elderly and minorities.
• Over time these numbers have changed little.
• Little is known about factors that lead to readmission.
• Risk models perform poorly.

OBJECTIVE

• To systematically investigate patient perspectives about their readmission in order to identify novel and potentially modifiable risk factors.
• “Hypothesis generating”

METHODS

• 30-60 minute interviews were performed with patients readmitted for any cause within 6 months of index HF admission.
• 23 open-ended questions on inpatient experience, transitions of care, follow-up, adherence, psychosocial issues, post-discharge environment, perceived cause(s) of readmission.

• Patients were recruited from:
  ✓ An academic, tertiary-care, fee-for-service hospital (N=20)
  ✓ A community-based hospital serving an integrated health care system (N=8)
• Qualitative analysis was used to code and develop “themes.”
• A sufficient number of patients were recruited to achieve “thematic saturation”
• Patient information and interview findings were verified using chart review.

RESULTS

1. Distressing symptoms
   Patients were focus on physical symptoms.
   “Shortness of breath and chest pain. I think they finally figured out I was just retaining fluid… I just couldn’t get any air, so I went to local hospital to try to figure out if I just needed some oxygen.”

2. Unavoidable HF progression
   Attribution of readmission to an inexorable worsening of HF was often the final commentary.
   “I’ve been so sick for so long, it just seems perpetual to me. I’m just always sick. It is just a matter of how sick I feel from day to day.”

3. Good, not perfect, self-care
   Many “admitted” episodes of nonadherence constituted minimal infractions. Self-care issues were rarely cited as the reason for readmission.
   “I eat more salt in the hospital than I do at home! Salt is not my problem. Diet is not my problem. It is hard to limit my intake but not as hard as it was.”

4. Psycho-social influences
   Care was complicated by non-medical issues
   “I have a problem getting to the pharmacy, and paying. I always need money, but am not working. Without money, you can’t buy medication.”

5. Health system failures
   Patients frequently implicated suboptimal care as contributing to their readmission.
   “They made an appointment to see my regular doc, but he had retired, so I got new doc and then she was sick, so had to wait another day. When I finally saw her, she said my blood pressure was so low they couldn’t measure it. I was weak bro.”

CONCLUSION

• We performed the first systematic assessment of patient perspectives of HF readmission.
• We found that patients believe their readmissions were:
  ✓ Rarely from a single cause
  ✓ Highly heterogeneous
  ✓ Rarely due to poor compliance
  ✓ Difficult to divide into preventable vs not
• Future research and interventions may benefit from:
  ✓ A multifaceted approach
  ✓ Focus on symptom (as opposed to fluid) management
  ✓ Research into the role of the post-discharge environment

PATIENT Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N=28</th>
<th>Characteristics (continued)</th>
<th>N=28</th>
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</thead>
<tbody>
<tr>
<td>Age, median (range)</td>
<td>60 years (29-88)</td>
<td>COPD</td>
<td>32% (N=9)</td>
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<tr>
<td>Female</td>
<td>43% (N=12)</td>
<td>Active smoking</td>
<td>18% (N=5)</td>
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<tr>
<td>Black, American Indian, or Hispanic</td>
<td>25% (N=7)</td>
<td>History of alcohol dependence</td>
<td>7% (N=2)</td>
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<tr>
<td>Living at home independently</td>
<td>96% (N=27)</td>
<td>Recorded history of depression</td>
<td>21% (N=6)</td>
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<tr>
<td>Married</td>
<td>50% (N=14)</td>
<td>Index hospitalization</td>
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<tr>
<td>Cardiac disease</td>
<td></td>
<td>Systolic blood pressure, mean (SD)</td>
<td>113 mmHg (12)</td>
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<tr>
<td>Documented coronary disease</td>
<td>50% (N=14)</td>
<td>Creatinine, discharge, mean (SD)</td>
<td>1.6 mg/dl (0.8)</td>
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<tr>
<td>History of atrial fibrillation</td>
<td>54% (N=15)</td>
<td>BNP, serum, discharge, mean (SD)</td>
<td>1028 pg/ml (594)</td>
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<tr>
<td>LVEF, mean (SD)</td>
<td>0.42 (0.20)</td>
<td>LOS, median (range)</td>
<td>4 days (2-16)</td>
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<tr>
<td>Left ventricular assist device</td>
<td>7% (N=2)</td>
<td>Medications at discharge</td>
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<td>Prior heart transplantation</td>
<td>4% (N=1)</td>
<td>Furosemide equivalents 24 h, mean (SD)</td>
<td>121 mg (110)</td>
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<td>Other medical history</td>
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<td>Beta-blocker</td>
<td>71% (N=20)</td>
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<td>Prior cerebrovascular accident</td>
<td>7% (N=2)</td>
<td>Warfarin</td>
<td>57% (N=16)</td>
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<td>History of hypertension</td>
<td>57% (N=16)</td>
<td>Time d/c to readmit, median (range)</td>
<td>33 days (2-166)</td>
</tr>
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<td>Diabetes</td>
<td>46% (N=13)</td>
<td>Readmission LOS, median (range)</td>
<td>6 days (2-67)</td>
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<td>Chronic kidney disease</td>
<td>43% (N=12)</td>
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CITATIONS
