Heart Failure in Nursing Facilities

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Disclosures

• None
Skilled Nursing Facility (SNF) vs. Long Term Care (LTC)

Nursing Facilities can house either or both . . .

<table>
<thead>
<tr>
<th>Skilled Nursing Facility (SNF)</th>
<th>Long Term Care (LTC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+++ medical acuity</td>
<td>+ medical acuity</td>
</tr>
<tr>
<td>+++ specialty needs and support (PT, OT, nursing, SW)</td>
<td>++ specialty needs and support (activities, SW, nursing)</td>
</tr>
<tr>
<td>Goal is to mobilize, rehabilitate and return to lower level of care (home, ALF)</td>
<td>Goal is to have support to live the rest of life as functional and meaningful as possible</td>
</tr>
<tr>
<td>SNF patients can end up in LTC</td>
<td>LTC residents can utilize their SNF benefit</td>
</tr>
</tbody>
</table>
Potentially Preventable Readmissions (PPR) Measures

A readmission is considered potentially preventable:
- Unplanned
- Coded as the principal diagnosis on the readmission claim

**SNF Value-Based Purchasing (VBP) Program**
SNF 30-Day Potentially Preventable Readmission Measure

*Within-Stay*: PPRs should be avoidable with *sufficient medical monitoring and appropriate patient treatment*

**SNF Quality Reporting Program**
Potentially Preventable 30-Day Post-Discharge Readmission

*Discharge*: PPR refers to a readmission that should be avoidable with *adequately planned, explained, and implemented post discharge instructions*, including the establishment of appropriate follow-up ambulatory care
PPR Measures Use 3 Readmission Windows

1. Prior acute stay ≤ 30 days
   - Index PAC Stay
   - 30-day post-PAC discharge window

2. Prior acute stay
   - Index PAC Stay +1
   - Within-PAC stay window

3. Prior acute stay
   - Index SNF Stay
   - 30-day post-discharge from prior proximal hospital

Source: RTI International
<table>
<thead>
<tr>
<th>PPR Category</th>
<th>Number of PPR in SNF Sample</th>
<th>% PPR in SNF Sample</th>
<th>% of PPR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inadequate management of chronic conditions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult asthma*</td>
<td>853</td>
<td>0.05%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease (COPD)*</td>
<td>5,872</td>
<td>0.34%</td>
<td>3.42%</td>
</tr>
<tr>
<td>Congestive heart failure (CHF)*</td>
<td>27,668</td>
<td>1.62%</td>
<td>16.11%</td>
</tr>
<tr>
<td>Diabetes short-term complication*</td>
<td>2,210</td>
<td>0.13%</td>
<td>1.29%</td>
</tr>
<tr>
<td>Hypertension*/Hypotension</td>
<td>2,271</td>
<td>0.13%</td>
<td>1.32%</td>
</tr>
<tr>
<td><strong>Inadequate management of infections</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza</td>
<td>972</td>
<td>0.06%</td>
<td>0.57%</td>
</tr>
<tr>
<td>Bacterial pneumonia*</td>
<td>14,837</td>
<td>0.87%</td>
<td>8.64%</td>
</tr>
<tr>
<td>Urinary tract infection*/ Kidney infection</td>
<td>10,368</td>
<td>0.61%</td>
<td>6.04%</td>
</tr>
<tr>
<td>C. difficile infection</td>
<td>4,362</td>
<td>0.25%</td>
<td>2.54%</td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>53,029</td>
<td>3.10%</td>
<td>30.88%</td>
</tr>
<tr>
<td>Skin and subcutaneous tissue infections</td>
<td>3,290</td>
<td>0.19%</td>
<td>1.92%</td>
</tr>
<tr>
<td><strong>Inadequate management of other unplanned events</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dehydration*/ Electrolyte imbalance</td>
<td>5,236</td>
<td>0.31%</td>
<td>3.05%</td>
</tr>
<tr>
<td>Aspiration pneumonitis (food/vomitus)</td>
<td>9,209</td>
<td>0.54%</td>
<td>5.36%</td>
</tr>
<tr>
<td>Anticoagulant complications (within-stay only)</td>
<td>4,602</td>
<td>0.27%</td>
<td>2.68%</td>
</tr>
<tr>
<td>Acute delirium (within-stay only)</td>
<td>23</td>
<td>0.00%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Acute renal failure*</td>
<td>14,940</td>
<td>0.87%</td>
<td>8.70%</td>
</tr>
<tr>
<td>Arrhythmia</td>
<td>4,830</td>
<td>0.28%</td>
<td>2.81%</td>
</tr>
<tr>
<td>Deficiency and Other Anemia (within-stay only)</td>
<td>9</td>
<td>0.00%</td>
<td>0.01%</td>
</tr>
<tr>
<td>Intestinal impaction</td>
<td>336</td>
<td>0.02%</td>
<td>0.20%</td>
</tr>
<tr>
<td>Pressure ulcers</td>
<td>310</td>
<td>0.02%</td>
<td>0.18%</td>
</tr>
<tr>
<td>Deep Vein Thrombosis/Pulmonary Embolism (within-stay only)</td>
<td>-</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Notes: N = 1,712,862 in 2014 SNF Sample, * Ambulatory Care Sensitive Condition
SNF 30-Day PPR Measure PPRs, 2014 (cont’d)

<table>
<thead>
<tr>
<th>PPR Category</th>
<th>Number of PPR in SNF Sample</th>
<th>% PPR in SNF Sample</th>
<th>% of PPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate injury prevention</td>
<td>6,488</td>
<td>0.38%</td>
<td>3.78%</td>
</tr>
<tr>
<td>Head Injury (within-stay only)</td>
<td>1,340</td>
<td>0.08%</td>
<td>0.78%</td>
</tr>
<tr>
<td>Upper Extremity Fracture (within-stay only)</td>
<td>574</td>
<td>0.03%</td>
<td>0.33%</td>
</tr>
<tr>
<td>Lower Extremity Fracture (within-stay only)</td>
<td>4,574</td>
<td>0.27%</td>
<td>2.66%</td>
</tr>
<tr>
<td><strong>Total - Post-Discharge Potentially Preventable Readmissions</strong></td>
<td><strong>171,715</strong></td>
<td><strong>10.03%</strong></td>
<td><strong>100.00%</strong></td>
</tr>
<tr>
<td><strong>Total - All Cause, Unplanned Readmissions</strong></td>
<td><strong>317,157</strong></td>
<td><strong>18.52%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Notes: N = 1,712,862 in 2014 SNF Sample, * Ambulatory Care Sensitive Condition
Co-morbidity among Chronic Conditions for Medicare FFS Beneficiaries: 2010
Clinical Outcomes in HF Patients Discharged to Home vs. SNF

P < 0.001

Allen et. al. Circ HF 2011
Clinical Outcomes in HF Patients Discharged to Home vs. SNF

[Graph showing rehospitalization rates over time for patients discharged to SNF and home, with a P value of < 0.001]

Allen et. al. Circ HF 2011
Implications?

Patients discharged to SNF after HF hospitalization face substantial risk

1. >50% dead in 1 year → hospice for some?
2. Frequent readmission → SNF alone not enough for transitional care?
3. Poor SNF outcomes → investigate quality?
Timing of Readmissions

Burke RE et al, JAMDA 2015
Strategies to Improve Transitions and Reduce Rehospitalizations

- Acute Care Needs Resolved
  - Is the patient stable for SNF transfer?
  - Is the information in the handoff accurate and relevant to the patient's care?

- Hospital Handoff
  - Is the handoff from SNF to community appropriate and is there a safety net in place?

- SNF Identification and Monitoring of Illness with appropriate handoff

- Severity of Patients Condition
  - Are the appropriate processes of care in place to care for the patient in the SNF?

- Is the patient's disease increasing in severity?
Context for Transitional Care

Acute Care Episode

Adapted from the National Quality Forum committee on Measurement Framework: Evaluating Efficiency across Episodes of Care.

Trajectory 1
Relatively healthy adult with onset of new chronic illness

Trajectory 2
Adult with multiple chronic conditions

Trajectory 3
Adults at end of life
To determine if a heart failure disease management program (HF-DMP) in skilled nursing facilities improve outcomes for patients.

The HF-DMP is run by a research nurse. The nurse assures that all components of the program are applied to the patient.

To gain understanding of this patient population and what their needs are as they transition through SNF to home.

To collect data through the post SNF period up to 60 days after SNF admission.
Why is the SNF Connect data different?

• Prospective data
• Includes patients with all types of insurance (not just FFS) i.e. Medicare Advantage Plans and private pay
• Important demographics are collected that are not in large databases such as EF, HF type (HF-pEF and other medications, cognition, geriatric syndromes
A Randomized Controlled Trial of HF Disease Management Program vs. Usual Care for Patients in HF in SNFs

Disease Management Program conducted by a trained RN in all facilities.

**Primary Endpoint**: composite outcome – all cause rehospitalization, ED visits, mortality at 60 days

**Secondary Endpoints**: Total number of rehospitalizations, composite outcome at 30 days, long term care admission, health status, self care at 60 days
What should Usual HF Care Look Like?

• Adherence to Guidelines
• Documentation of Performance Measures
• Avoidance of Exacerbation/decompensation
• Improved physical performance and physiologic stability

• How do we get there?
HF Care Path

New Goal New Custom Goal
edit pn Will have clear lung sounds, heart rate and rhythm within normal limits through the review date.

New Intervention New Custom Intervention
edit pn Check breath sounds and monitor/document for labored breathing.
Monitor/document for the use of accessory muscles while breathing.
[NG] II

edit pn Elevate legs and feet when sitting.
[NG] II

edit pn Encourage adequate nutrition. Offer small frequent feedings.
[NG, DTY] II [K]

edit pn Encourage resident to avoid added salt in food or foods high in sodium.
[NG, DTY] II [K]

edit pn Give cardiac medications as ordered.
[NG] II

edit pn Head of bed elevated.
[NG] II [K]

edit pn Monitor Lab work as ordered.
[NG] II

edit pn Monitor/document for sxs of Congestive Heart Failure:
dependent edema of legs and feet, periorbital edema, SOB upon exertion, cool skin, dry cough, distended neck veins, weakness, weight gain unrelated to intake, crackles and wheezes upon auscultation of the lungs. Orthopnea, weakness and/or fatigue, increased heart rate (Tachycardia) lethargy and disorientation.
[NG] II

edit pn Monitor/document/report to MD PRN any sxs of digitalis toxicity: Fatigue, muscle weakness, anorexia, nausea, yellow halos around objects.
[NG] II

edit pn Reposition or encourage resident to change positions every 2 hours.
[NG] II [K]

edit pn Vital signs as ordered.
[NG] II

edit pn Weight monitoring as ordered.
[NG] II [K]

New Task New Custom Task

NO ASSIGNED TASKS
What is happening with Usual HF Care in SNF
Represents 28 SNFs and 259 Patients

• 58% women, 93% Caucasian,
• 79±10 years,
• mean ejection fraction 50%±16%
• 27% with EF ≤40%
• Median length of stay 21 days.

Boxer unpublished data
For those patients with at least one visit
Each assessment 3 times in 7 days
Lessons Learned 1

• Study RN conducting the DMP
  Time consuming
  Thwarted by facility and patient routines

• Facility, corporate, physician engagement - key importance to keep the trial going

• Changing the culture of care and HF practice in facilities is too labor intensive without the help of technology
Lessons Learned 2

• Informed Consent: Extremely challenging in this population of patients;
  • 65% of eligible patients refused consent.
    • Proxy/LAR often refused
    • General sense of mistrust
    • Patients felt too tired, too overwhelmed or too busy

• Timing of recruitment - key importance
  • If patients are approached too early in their stay - likely to refuse
The SNF and LTC can be late to catch a patient with HF decompensation

- HF is not always the primary reason why a patient is in SNF

  This will catch the SNF off guard

- Highly variable information is given to the SNF regarding HF diagnosis

- Care Paths for HF may or may not be available and/or may not be operationalized effectively
The LTC Patient with HF: *Do We Know Who They Are?*

- Diagnostic Uncertainty
  - Utility of signs and symptoms
  - History of hospitalization for HF
  - Importance of knowing HF diagnosis at the time of admission (clinical vs. administrative)

- Key for Developing the appropriate plan of care
  - Physical Performance
  - Medication management
  - Monitoring
  - Avoiding exacerbating factors
  - Avoiding acute events

- Facilities preserving resources
### Predicting HF Based on Admission Characteristics

<table>
<thead>
<tr>
<th>Clinical Characteristic</th>
<th>Full Model</th>
<th>Reduced Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AOR (95% CI)</td>
<td>p value</td>
</tr>
<tr>
<td>Admission assessment history of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HF</td>
<td>11.65 (4.55, 29.83)</td>
<td>0.1254</td>
</tr>
<tr>
<td>Fluid on the lungs</td>
<td>1.96 (0.83, 4.65)</td>
<td>0.8042</td>
</tr>
<tr>
<td>Peripheral edema</td>
<td>0.87 (0.30, 2.57)</td>
<td>0.2443</td>
</tr>
<tr>
<td>Orthopnea</td>
<td>1.72 (0.69, 4.27)</td>
<td>0.9599</td>
</tr>
<tr>
<td>PND</td>
<td>1.03 (0.36, 2.92)</td>
<td>0.3920</td>
</tr>
<tr>
<td>Dyspnea on moderate activity</td>
<td>0.26 (0.07, 0.90)</td>
<td>0.0337</td>
</tr>
<tr>
<td>Dyspnea compared to peers</td>
<td>3.17 (1.01, 9.90)</td>
<td>0.0475</td>
</tr>
<tr>
<td>Dyspnea walking on the level</td>
<td>3.15 (1.07, 9.31)</td>
<td>0.0377</td>
</tr>
<tr>
<td>Dyspnea with ADLs</td>
<td>0.72 (0.26, 2.02)</td>
<td>0.5336</td>
</tr>
<tr>
<td>Cardiovascular comorbidities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Coronary Artery Disease</strong></td>
<td>2.83 (1.12, 7.15)</td>
<td>0.0282</td>
</tr>
<tr>
<td>Atrial Fibrillation</td>
<td>1.20 (0.50, 2.91)</td>
<td>0.6809</td>
</tr>
<tr>
<td>Hypertension</td>
<td>0.85 (0.27, 2.66)</td>
<td>0.7752</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>0.83 (0.33, 2.09)</td>
<td>0.6979</td>
</tr>
<tr>
<td>Physical findings:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rales on auscultation</td>
<td>0.88 (0.46, 1.69)</td>
<td>0.6988</td>
</tr>
<tr>
<td>Peripheral edema</td>
<td>1.00 (0.54, 1.85)</td>
<td>0.9989</td>
</tr>
<tr>
<td>Third heart sounds</td>
<td>1.19 (0.20, 7.01)</td>
<td>0.8445</td>
</tr>
<tr>
<td>Jugular venous elevation</td>
<td>0.76 (0.08, 7.31)</td>
<td>0.8116</td>
</tr>
<tr>
<td>Admission HF medications:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furosemide</td>
<td>3.70 (1.52, 9.02)</td>
<td>0.0040</td>
</tr>
<tr>
<td>ACE inhibitor</td>
<td>1.20 (0.54, 2.64)</td>
<td>0.6575</td>
</tr>
<tr>
<td>β-blocker</td>
<td>2.60 (1.15, 5.85)</td>
<td>0.0216</td>
</tr>
<tr>
<td>Digoxin</td>
<td>1.41 (0.43, 4.59)</td>
<td>0.5716</td>
</tr>
</tbody>
</table>

Heckman et. al. CGJ 2013
How do we Measure Risk?

Can we identify who is at the highest risk for?
- Mortality
- Hospitalization
- Decompensation
- Developing a new diagnosis of HF
Mortality in HF Patients in LTC (GOLD study)
### Table 3. Results of the Proportional Hazards Regression Modeling to Predict Time to Mortality Among Older Long-Term Care Residents With Heart Failure in Southwestern Ontario (n = 117)

<table>
<thead>
<tr>
<th>Clinical Characteristic</th>
<th>Univariate Models</th>
<th></th>
<th></th>
<th>Multivariate Model</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Point Estimate (SE)</td>
<td>Hazard Ratio (95% CI)</td>
<td>P Value</td>
<td>Point Estimate (SE)</td>
<td>Hazard Ratio (95% CI)</td>
<td>P Value</td>
</tr>
<tr>
<td>Age</td>
<td>-0.02 (0.04)</td>
<td>0.98 (0.91–1.05)</td>
<td>.5</td>
<td>-0.03 (0.05)</td>
<td>0.97 (0.88–1.07)</td>
<td>.52</td>
</tr>
<tr>
<td>Sex male</td>
<td>-0.20 (0.48)</td>
<td>0.82 (0.32–2.10)</td>
<td>.67</td>
<td>-0.51 (0.55)</td>
<td>0.60 (0.20–1.78)</td>
<td>.36</td>
</tr>
<tr>
<td>History of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulmonary disease</td>
<td>0.69 (0.45)</td>
<td>1.99 (0.82–4.79)</td>
<td>.13</td>
<td>0.77 (0.53)</td>
<td>2.16 (0.77–6.07)</td>
<td>.15</td>
</tr>
<tr>
<td>Renal failure</td>
<td>0.92 (0.45)</td>
<td>2.52 (1.04–6.08)</td>
<td>.04</td>
<td>0.80 (0.51)</td>
<td>2.24 (0.82–6.12)</td>
<td>.12</td>
</tr>
<tr>
<td>Functional and cognitive measures:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline Barthel Index</td>
<td>-0.13 (0.04)</td>
<td>0.87 (0.80–0.95)</td>
<td>.002</td>
<td>-0.16 (0.06)</td>
<td>0.85 (0.76–0.95)</td>
<td>.005</td>
</tr>
<tr>
<td>Baseline MDS-Cog</td>
<td>0.07 (0.08)</td>
<td>1.07 (0.91–1.26)</td>
<td>.42</td>
<td>-0.10 (0.11)</td>
<td>0.91 (0.74–1.12)</td>
<td>.37</td>
</tr>
<tr>
<td>Admission medications:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE inhibitors</td>
<td>-0.40 (0.45)</td>
<td>0.67 (0.28–1.61)</td>
<td>.37</td>
<td>-0.78 (0.51)</td>
<td>0.46 (0.17–1.25)</td>
<td>.13</td>
</tr>
<tr>
<td>β-Blockers</td>
<td>-0.57 (0.45)</td>
<td>0.57 (0.24–1.37)</td>
<td>.21</td>
<td>-0.46 (0.54)</td>
<td>0.63 (0.22–1.81)</td>
<td>.40</td>
</tr>
<tr>
<td>Anticoagulants</td>
<td>0.49 (0.44)</td>
<td>1.64 (0.70–3.86)</td>
<td>.26</td>
<td>1.01 (0.49)</td>
<td>2.75 (1.05–7.24)</td>
<td>.04</td>
</tr>
<tr>
<td>Major tranquilizers</td>
<td>0.89 (0.48)</td>
<td>2.44 (0.95–6.30)</td>
<td>.065</td>
<td>1.29 (0.55)</td>
<td>3.64 (1.25–10.65)</td>
<td>.02</td>
</tr>
</tbody>
</table>
Hospitalization

• Risk scores developed for older adults (not specific to LTC patients):
• HF risk scores are not developed in the older, frail and comorbid LTC population.
• For this population have specific variables to consider which includes non-patient variables
• Facility based factors, timing of admission, MD/NP visit timing
• NH based management, frequent interaction with other conditions: mentation, kidney function, underlying infection
Readmission Calculator Patients 65 and Older.

- Demographics
  - Age
  - Sex
- Presentation
  - In-hospital Cardiac Arrest
- History
  - Diabetes
  - Heart Failure
  - Coronary Artery Disease
  - Prior PCI
  - Aortic Stenosis
  - Stroke, ischemic or hemorrhagic
  - COPD
  - Dementia
- Physical Exam (on admission)
  - Systolic Blood Pressure
  - Heart Rate
  - Respiratory Rate
- Diagnostics (on admission)
  - Sodium
  - Blood Urea Nitrogen
  - Creatinine
  - Hematocrit
  - Glucose
  - LV Ejection Fraction

Readmission Risk Score
http://www.readmissionscore.org/heart_failure.php

Based on: Keenan et. al. CCQO 2008
**LACE Score**

**Table 1: Components of the LACE index.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of stay, days</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4–6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>7–13</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>≥14</td>
<td>7</td>
</tr>
<tr>
<td>Acute (emergent) admission</td>
<td>Yes</td>
<td>3</td>
</tr>
<tr>
<td>Charlson comorbidity index score</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>≥4</td>
<td>5</td>
</tr>
<tr>
<td>Emergency department visits during previous 6 months</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>≥4</td>
<td>4</td>
</tr>
</tbody>
</table>

The LACE score is calculated by summing the points of the above 4 variables.

Van Walraven et.al. CMAJ 2010
From: International Validity of the HOSPITAL Score to Predict 30-Day Potentially Avoidable Hospital Readmissions


Table 1. HOSPITAL Score\(^a\) for 30-Day Potentially Avoidable Readmissions

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Points if Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low hemoglobin level at discharge (&lt;12 g/dL(^b))</td>
<td>1</td>
</tr>
<tr>
<td>Discharge from an Oncology service</td>
<td>2</td>
</tr>
<tr>
<td>Low sodium level at discharge (&lt;135 mEq/L(^c))</td>
<td>1</td>
</tr>
<tr>
<td>Procedure during hospital stay (any ICD-9(^7) coded procedure)</td>
<td>1</td>
</tr>
<tr>
<td>Index admission type: urgent or emergent (nonelective)</td>
<td>1</td>
</tr>
<tr>
<td>No. of hospital admissions during the previous year</td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>0</td>
</tr>
<tr>
<td>2-5</td>
<td>2</td>
</tr>
<tr>
<td>&gt;5</td>
<td>5</td>
</tr>
<tr>
<td>Length of stay ≥5 d</td>
<td>2</td>
</tr>
</tbody>
</table>

Abbreviations: ICD, international classification of disease; NA, not applicable.

\(^a\) Maximum of 13 points per patient.

\(^b\) To convert to g/L, multiply by 10.

\(^c\) To convert to mmol/L, multiply by 1.
Risk for Rehospitalization for Patients in SNF

**High Risk:** (One of the following)
1) Hospitalized last 6 months for HF exacerbation
2) In the SNF (primary or ACTIVE secondary diagnosis)
3) NYHA Class 3 & 4
4) Hypertensive  BP>150/90

**Low Risk:** (Both must be present)
1) >6 months since last hospitalization for HF
2) NYHA 1 & 2

Dolansky et. al. Heart & Lung 2016
Reason for Readmissions for (%) SNF Patients without HF (n=196) and HF (n=35)

Dolansky et. al. Heart & Lung 2016
Type of Symptoms related to Rehospitalizations among SNF Patients without HF (n=84) and with HF (n=18).

Dolansky et. al. Heart & Lung 2016
Challenges for the LTC Patient on their SNF Benefit

- Returning from the hospital to a LTC bed
- Clinical care team for the SNF patient
- Are these patients more likely to return to the hospital?
- Little research to guide how to change care in facilities to improve outcomes.
• Mr. D is an 81 y/o male who comes to your facility after a hip fracture which was pinned and is in your facility for rehab. He has a history of heart failure and diabetes. He has been progressing well for two weeks. He starts to struggle in rehab becoming more fatigued and stops participating in activities stating he “doesn’t feel like it” He seems to be more confused at night – calling out – He calms down once they sit him up in the hallway. He falls asleep.
Training, Staffing, Culture and Regulations

• Is staff qualified to assess a patient with HF
  • Signs and symptoms
    • Weight
    • For SNF – pre-hospital signs and symptoms of decompensation
    • **Aids, PT changes in function, increased dyspnea, tight clothing etc
  • Exacerbating factors (diet, medications)

• Staff communication
  • Between shifts
  • Between disciplines
  • With physicians and mid-level providers

• Attention to Survey Parameters (appropriate)
Is there a Systematic Approach to HF Care in LTC?

- Different “rules” for different HF patients regarding weight loss and weight gain
- Following guidelines for medication management
  - Many reasons why guideline medication management may *Not* be appropriate
- Is an appropriate diet available? (most have no-added salt)
  - Who needs a low sodium diet?
  - Should all patients be able to make their own dietary choices?
Staff Knowledge and Ability

• Are staff able to:
  • Identify
  • Track
  • Recognize clinical changes (early)
  • Act on the clinical changes - timely and appropriately (protocols)
  • Communicate changes in patient condition to the physician/NP
MD Supervision

• Response to decompensation
  • Is the physician confident that patient can be monitored appropriately?
  • Does the physician have the ability to intervene?
    • Acquire accurate data
    • Give IV medications
  • Does the physician feel competent in HF management?
• Does the MD and staff communicate effectively?
Key HF Care Elements -

- Disease Management Programs (DMPs):
  - Decrease mortality/ readmissions (community)
  - Components of a DMP:
    - Interdisciplinary team
    - Pharmacologic and lifestyle interventions
    - Discharge and post-discharge care

NHs ideal venue for post-discharge HF care venues as care is team-based, BUT
- DMPs untested in NHs

Resources for HF Disease Management in SNF

Heart failure management in skilled nursing facilities: a scientific statement from the American Heart Association and the Heart Failure Society of America

Jurgens CY, et. al. Circ Heart Fail. 2015 May;8(3):655-87

AMDA's Clinical Practice Guideline on Heart Failure in the Long-Term Care Setting
http://www.amda.com/tools/guidelines.cfm#heartfailure