Coordinating Heart Failure care in order to Reduce Readmissions

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October 24, 2015
Outline

• Why HF readmissions are an important focus

• What we’ve learned:
  – transitions in care
  – Identifying risk

• How Intermountain uses an internal HF identification & risk report with a multidisciplinary pathway to improve care
Heart Failure Care

• Affects ~6 million people in the U.S.
  – 10% have advanced HF

• Cost to patients
  – Chronic illness, risk of death, poor QOL and functional status

• Cost to health delivery
  – Poor outcomes: Readmissions and mortality
  – High expense at EOL

• Transitions are a time of vulnerability
  – Progressive illness
  – Comorbidity burden
  – Numerous medications
  – Multiple providers
The Cost Burden of HF

The Three-Phase Terrain of Heart Failure Readmissions
Akshay S. Desai
*Circ Heart Fail* 2012;5:398-400;
Hospitalization for HF

- Sentinel event
- Risk for recurrent hospitalization – 50% at 6 months
- 1-year mortality of ~30%
- Survival of less than 1 year with the 3rd hospitalization
- High risk population
- Hospitalizations main cost of HF
CMS Readmissions Reduction Program

- Affordable Care Act established Hospital Readmissions Reduction Program
- Reduced Inpatient Prospective Payment System
  - Applies to: **HF**, AMI, pneumonia
  - Extending to hip replacement, COPD, CABG (2017)
- In 2015, hospitals with “excessive” readmissions stand to lose ≤3% of Medicare reimbursement

http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html
Complexity of an Optimal Discharge

• Discharge process requires multi-components with multiple interventions
• There is no magic bullet or single intervention
• Most interventions aimed at improving organizational and technical aspects
# Direction from HF Guidelines

## Transitions in Care

| Class I (LOE B) | Use effective systems of care coordination to guide transitions, use of GDMT in attempts to prevent readmissions  
|                 | Every patient should have a detailed plan of care (GDMT titration, comorbid Tx, timely follow up)  
|                 | Multidisciplinary HF disease management is recommended for those at high risk for hospital readmissions  
|                 | Palliative and supportive care is effective in advanced HF to improve QOL |

| Class IIb (LOE B) | Reasonable to schedule follow up within 7-10 days and call within 72 hours of discharge  
|                  | Reasonable to use risk prediction tools to assess risk for events |

Yancy et al. 2013 ACCF/AHA HF Guidelines. Circ
### Impact of HF GDMT

#### Table 18. Medical Therapy for Stage C HFrEF: Magnitude of Benefit Demonstrated in RCTs

<table>
<thead>
<tr>
<th>GDMT</th>
<th>RR Reduction in Mortality (%)</th>
<th>NNT for Mortality Reduction (Standardized to 36 mo)</th>
<th>RR Reduction in HF Hospitalizations (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE inhibitor or ARB</td>
<td>17</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>Beta blocker</td>
<td>34</td>
<td>9</td>
<td>41</td>
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<tr>
<td>Aldosterone antagonist</td>
<td>30</td>
<td>6</td>
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<td>Hydralazine/nitrate</td>
<td>43</td>
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</table>

ACE indicates angiotensin-converting enzyme; ARB, angiotensin-receptor blocker; GDMT, guideline-directed medical therapy; HF, heart failure; HFrEF, heart failure with reduced ejection fraction; NNT, number needed to treat; RCTs, randomized controlled trials; and RR, relative risk.

Adapted with permission from Fonarow et al (483).
AHA Scientific Statement

Transitions of Care in Heart Failure
A Scientific Statement From the American Heart Association

Nancy M. Albert, PhD, RN, CCNS, CHFN, CCRN, FAHA, Chair;
Susan Barnason, PhD, RN, APRN-CNS, CEN, CCRN, FAHA;
Anita Deswal, MD, MPH, FAHA; Adrian Hernandez, MD, MHS, FAHA;
Robb Kociol, MD; Eunyoung Lee, PhD, RN, FNP, ACNP, FAHA;
Sara Paul, DNP, RN, FNP, CHFN, FAHA; Catherine J. Ryan, PhD, RN, APRN-CNS, CCRN, FAHA;
Connie White-Williams, PhD, RN, FAHA; on behalf of the American Heart Association Complex Cardiovascular Patient and Family Care Committee of the Council on Cardiovascular and Stroke Nursing, Council on Clinical Cardiology, and Council on Quality of Care and Outcomes Research

Source: Circ Heart Fail. 2015;8:000-000.
Figure. Prominent factors impeding transition of care in chronic heart failure care. GDMC indicates guideline-directed medical care; HCP, healthcare provider; and Pt, patient.
AHA Transitions in HF Care Recommendations

• Systematically implement transitions principles in high Risk HF patients
• Routinely assess patients for risk category
• Ensure qualified HF nurse or other professionals provide services
• Allot adequate time to teach and evaluate effectiveness
• Implement hand-off procedures
• Develop, monitor, ensure transparency results of quality measures
• Consider patient’s perceptions to aid support during transitions
• Ensure available transitions in care program plan in writing
• Use health IT for program sustainability
  – Source: Circ Heart Fail. 2015;8:000-000.
FIG 1.
Key components of an ideal transition in care, when rotated ninety degrees to the right the bridge patients must cross during a care transition is demonstrated.
Comprehensive Care Management

Source: Advisory Board. 2012. Mastering the CV Continuum
Areas of Opportunity

The CardioMEMS™ HF System

St. Jude Medical is proud to introduce a new tool for comprehensive heart failure care. The CardioMEMS™ HF System is the first and only FDA-approved heart failure (HF) monitoring system proven to significantly reduce HF hospital admissions and improve quality of life in NYHA class III patients. ¹

When used by clinicians to manage heart failure, the CardioMEMS HF System is:

- **Safe and reliable** – 98.6% of patients were free from device or system complications.²
- **Clinically proven** – reduced HF admissions by 37%.²
- **Proactive and personalized** – patient management through direct monitoring of PA pressure and titration of medications

One Hospital Admission = 4.5 days
Risk Assessment

Targeting a Subset of the Population

What is High-Risk?

- The narrow subset of patients that are most likely to have the highest cost, poorest outcomes and greatest avoidable utilization, across their longitudinal care.

Characteristics of a High-Risk Patient

- Multiple comorbidities
- Frequent readmissions
- High historical utilization, cost
- High predicted future cost
- Psychosocial barriers

Source: Advisory Board. 2012. Mastering the CV Continuum
Natural History of Heart Failure

Source: Adapted from Bristow, MR Management of Heart Failure, Heart Disease: A Textbook of Cardiovascular Medicine, 6th edition, ed. Braunwald et al.
Assessing Non-CV Risk

• 8 Ps:
  – Problem medications
  – Polypharmacy
  – Psychological conditions
  – Principle diagnosis
  – Poor health literacy
  – Patient support
  – Prior hospitalization
  – Palliative care

Source: Project BOOST; 2012. Society of Hospital Medicine
Institute for Healthcare Improvement - STAAR Guide

- Improved Transitions and Coordination of Care
- Reduction in Avoidable Rehospitalizations

Key Design Elements:
- Patient and Family Engagement
- Cross-Continuum Team Collaboration
- Health Information Exchange and Shared Care Plans
Intermountain inpatient HF (iHF) 30-day readmission risk score

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ROOM</th>
<th>EMPI</th>
<th>ACCT_NO</th>
<th>PT_NM</th>
<th>Month, Day, Year of ARRIVAL_TIME</th>
<th>SYMPTOM</th>
<th>BNP &gt; 200</th>
<th>DIURETIC LAST 24 HRS</th>
<th>EF &lt;= 40</th>
<th>PRIOR CMS HF</th>
<th>KEY WORD</th>
<th>PRIOR LZONE PRIOR 30-DAYS</th>
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Report is emailed each day to hospital units

1. Likelihood of having a HF dx
2. Risk of readmission
3. Risk of mortality
   (Red is high likelihood)
HF High Risk Care Process Pathway

1. **Patient Identified as High Risk Heart Failure**
   - **HF Risk Stratified per P**
   - **Enhanced Assessment:**
     - Psych-social assessment within and community providers
     - Engage social services early
     - Automatic home health referral to Home Health:
       - Home Safety Assessment
       - Encourage home health involvement

2. **Case Manager/Social Worker**
   - Responsibilities:
     - Use nursing care plan
     - Start M4WDS education within
       - Using Teach Back
       - Involve family/caregivers
       - Reinforce M4WDS every 4 days
     - Give patient the diary and fluid sheet
     - Vess & document access to:
       - Identify Barriers to learning
       - Utilize whiteboards
       - Fluid restriction
       - Home strategies
       - Make sure patient is on 2g diet
       - Make sure patient has 2pm

3. **Care Coordination**
   - **Nursing**
   - **Pharmacy**
   - **Clinical Nutrition/Dietitian**
   - **Respiratory Therapy**
   - **Physical Therapy**
   - **Occupational Therapy**
   - **Speech**
   - **Diabetes Education**
   - **Case Management/Social Work**
   - **Physician/APC**

4. **Pharmacy**
   - Responsibilities:
     - Medication Reconciliation:
       - Admission reconciliation: identify barriers (e.g., noncompliance, financial difficulties)
       - Refer to patient assistance program if applicable
       - Review Core Measures:
       - Pharmacist session with patient and caregiver to review medications within 24 hours of discharge
       - Medications obtained and pillbox filled prior to discharge at the discretion of the Rx.
     - Document on discharge:
       - Pharmacy of choice on the care plan

5. **Bedside Nurse**
   - Responsibilities:
     - Discuss plan of care
     - Education Needs
     - Discharge Plans for all Clinical Disciplines
     - Assess risk for readmission
     - Consider palliative/hospice care consult
     - Consider assessment for advance therapies
     - Review Core Measures
     - Discuss anticipated discharge date
     - Confirm transportation at discharge
     - Communicate care plan to patient/caregiver and other team members
     - Assess patient advanced directive status
     - Communicate patient pharmacy of choice

6. **Follow-up Care Team**
   - Responsibilities:
     - Use Electronic Discharge Tool
     - Initial follow-up
       - High Risk Patient automatic referral to Home Health
       - Home health visit within 72 hours if applicable, or
       - Clinic appointment within 3-7 days based on risk score
     - Follow-up phone call within 48-72 hours
     - Referral to LWCC or Heart Failure classes/resources
     - Transmit discharge plan including electronic discharge order to follow-up provider
     - If discharged to SNF follow handover communication below
       - Case Manager/Social Worker review discharge plan with patient/caregiver
       - Recommend direct communication between hospital MD/APC and follow-up MD/APC
       - Direct communication between inpatient & outpatient care managers +/- SNF representative (if applicable)
     - Transmit discharge plan including electronic discharge orders to follow-up facility and PCP

7. **Patient Discharged**

8. **Follow-up Process Below**
Results: MKDH Pilot 2014

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Pilot (N=100)</th>
<th>Non-Pilot (N=75)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-day all-cause readmission</td>
<td>12 (12.0%)</td>
<td>9 (12.0%)</td>
<td>1.00</td>
</tr>
<tr>
<td>Mortality</td>
<td>7 (7.0%)</td>
<td>14 (18.67%)</td>
<td>0.03</td>
</tr>
<tr>
<td>LOS Days</td>
<td>4.5 ± 0.4</td>
<td>5 ± 0.6</td>
<td>0.44</td>
</tr>
<tr>
<td>Variable Cost</td>
<td>$8635.9</td>
<td>$9443.4</td>
<td>0.56</td>
</tr>
<tr>
<td>Discharged to Home Health</td>
<td>34 (34.0%)</td>
<td>14 (18.7%)</td>
<td>0.02</td>
</tr>
<tr>
<td>Discharged to SNF</td>
<td>17 (17.0%)</td>
<td>11 (14.7%)</td>
<td>0.84</td>
</tr>
</tbody>
</table>

Pilot patients = CVTU and High-High
(02/03/2014 – 06/30/2014)
Non-pilot patients = CVTU and High-High
found prior 02/03/2014
High Risk HF Pathway

Know your patient’s risk for readmission and/or mortality
Provide Meaningful Patient Education

Order through iPrint
Helping Patients to Understand their Plan of Care

<table>
<thead>
<tr>
<th>Patient Checklist</th>
<th>“Care About Your Care”</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>Overall plan of care</td>
</tr>
<tr>
<td>✔</td>
<td>Where patient is going after discharge</td>
</tr>
<tr>
<td>✔</td>
<td>Whom to contact if a problem arises during transfer</td>
</tr>
<tr>
<td>✔</td>
<td>Contact information of hospital, provider, pharmacy</td>
</tr>
<tr>
<td>✔</td>
<td>Medications: List, instructions, purpose, potential adverse effects</td>
</tr>
<tr>
<td>✔</td>
<td>Symptoms to watch for</td>
</tr>
<tr>
<td>✔</td>
<td>Followup appointments</td>
</tr>
</tbody>
</table>

Source: www.rwjf.org
Optimizing Transitions for Your Patient with Heart Failure

**Home Health**
To be eligible for home health care, the patient should need or benefit from:
- Intermittent visits from skilled nursing, physical, occupational, speech therapy or social work.
- Assess and instruct on Heart Failure MAWDS self-care management
- Review symptom recognition and vital sign/weight review and action plan based on results
- Coumadin teaching and management
- Assistance reducing frequent ER visits or re-hospitalizations
- Follow-up care after hospitalization
- Assistance with managing activities of daily living

Requirements:
- Patient has difficulty leaving home, leaves home infrequently for short periods, and uses an assistive device or assistance of another person to leave home.

**Hospice**
Hospice staff can continue to educate and reinforce MAWDS management principles for HF patients and assist with fluid management through medications, symptom review and action planning.

Hospice provides pain and symptom management, reduces re-hospitalization rates, improves patient and family satisfaction and increases life expectancy. To be eligible for hospice, an end stage Heart Failure patient might exhibit one or more of the following:
- NYHA Class 4/Stage D
- Multiple ER visits within the last six months
- Progressive functional decline
- Patient elects to forgo curative treatments or chooses not to return to the hospital
- Progressive impaired nutritional status
- Potential life expectancy of 6-12 months

**Palliative Care**
To be eligible for palliative care a patient may be nearing end of life but a 6–12 month prognosis is not required. They do not have to forgo curative treatments. Palliative care provides:
- Treatment that enhances comfort and improves the quality of an individual’s life
- Expected outcome is relief from the distressing symptoms of Heart Failure the easing of pain, and/or enhancing the quality of life
- Palliative care may reduce frequent ER visits and re-hospitalizations.
- Provide a medical provider coordinator for symptom management and end of life care decisions.
- Assist with care transitions.

To make a referral to Intermountain Homecare Hospice Services or Palliative Care Services, please call Amy Nielsen, RN, IMC Homecare Liaison 801-631-7360 or Homecare Intake 801-887-7350.
Optimizing Transitions for Your Patient with Heart Failure

Clinic Based Palliative Care:
- Order Palliative Care Services for symptom management, fluid management, MAWDS education, care coordination, advanced care planning, and transitional care services.

Homecare:
- Order SN, PT, ST, OT, HHA, and SW services 1-7 times a week for intermittent visits to assist with HF management, MAWDS education, fluid management (oral or IV lax), assistance with ADLs and IADLs, self-care activation for reduction in physician visits, ER use, and re-hospitalizations.

Home Based Palliative Care Services:
- Order Palliative Care Services for symptom management, fluid management, MAWDS education, care coordination, advanced care planning, and transitional care services.

Hospice:
- Order Hospice services for Stage D/NYHA Class 4 patients who need emotional, social, spiritual, and physical support at end-of-life. Hospice staff can provide symptom and fluid management while reinforcing MAWDS protocols. Hospice can evaluate for eligibility and collaborate with the medical support systems to provide ongoing care.

For more information, please call Amy Nielsen, RN, at 801-631-7360 or Homecare Intake at 801-887-7350.
What PROVIDERS can do to support optimal HF care

- Recognize your HF patients who are at risk for readmissions or mortality
- Support the multidisciplinary team approach using the high risk HF pathway
- Order homecare, preferably with Intermountain’s liaison
- Use the computerized CV discharge orders
- Support the process to schedule follow up appointments within 7 days of discharge
- Be prepared to have an honest discussion with patients about their HF diagnosis and severity
- Consider palliative care consultation if their survival is in question
- Communicate patient’s risk and unique discharge plans to their outpatient providers in discharge summary
Multi-layered Approach

Deploying All Strategies in Concert

The Fully Connected Cardiovascular Care Continuum

- Heart failure patient admitted to hospital
- Treated with HF order set created by multi-provider committee
- Round on by members of multidisciplinary team, including social worker, pharmacist
- Transition coach educates patient about condition, manages all components of discharge
- Patient returns home, understanding coach’s instructions on self-care, medications
- Patient visits hospital’s HF clinic, eventually returning to PCP care, receiving all continuing care from hospital providers

Plan of care crossing all sites of care

Source: Advisory Board. 2012. Mastering the CV Continuum
Thank You
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