Successful Strategies to Decrease Readmissions for Heart Failure Patients

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Christiana Care Health System- Delaware

- CCHS=1196 beds
  - Christiana Hospital: 906
  - Wilmington Hospital: 290

- Hospital admissions/year: 53,072
- ED visits/year: 187,317
- Primary HF admissions: 1456 (CCHS 1128, Wilm 328)
- HF Outpatient Clinic visits: 1300
The Numbers

5.1 million people are diagnosed with heart failure

825,000 new cases of heart failure are diagnosed annually

50% of patients with heart failure will die within 5 years of receiving the diagnosis

6,500,000 hospital days / year

300,000 deaths / year

5.4% of health care budget or ($38 billion)

(2013 ACCP/AHA Guideline for the Management of Heart Failure)

Figure 2

National Medicare Readmission Rates Started to Fall in 2012

Diagnosis for initial hospitalization
- Heart Failure
- Heart Attack
- Pneumonia

Performance (measurement) Time Period


NOTES: National readmission rates include Medicare fee-for-service unplanned hospitalizations for any cause within 30 days of discharge from an initial hospitalization for either heart failure, heart attack, or pneumonia. Rates are risk-adjusted for certain patient characteristics, such as age and other medical conditions.

SOURCE: Kaiser Family Foundation analysis of CMS Hospital Compare data files.
Best Practice

- EBM
  - ACCF/AHA Guidelines
  - Guideline directed medical therapy (GDMT)
  - Evidence-based admission order sets
  - Diuretic Protocol (New)
- Education/Teach-back
  - Educational packet
  - Information sheets
  - Get Well Network
- The Joint Commission
  - Advanced Certification in Heart Failure
  - TJC Core Measures:
    - ACHF-01-thru ACHF-06
- Close Outpatient Follow-up
  - Hospital discharge appointment within 7 days
  - Same Day appointments available for sick patients
  - Weekly follow-up appointments as needed

Heart Failure Navigators

- Identify HF admissions
- Meet with patient/family
- Educate/teach back
- Provide a scale and pillbox
- Daily rounds
- Document TJC Core Measures
- Schedule post-discharge f/u appointment
- Arrange HHC, DME etc
Our shared purpose
The Care Link Team

CCHS Ongoing Projects

Supportive Projects

Behavioral Projects
Heart Failure patients discharged to Skilled Nursing Facilities (SNFs) are at a high risk of readmission due to:
- a lack of care coordination
- limited access to usual providers
- inconsistent treatment approaches
- and high staff to patient ratios that limit the ability to provide proactive care

There are limited data and/or guidelines in the literature regarding coordinated care models in SNF’s for heart failure patients

We sought to coordinate heart failure care at multiple skilled nursing facilities to improve care and reduce the risk of readmission.
The Facts!

- Approximately 20% of HF patients at CCHS are discharged to skilled nursing facilities (SNF) within our community
- These patients are at a particularly high risk of readmission
  - FY13: All-cause Readmission for HF patients discharged to a SNF was 18%

The Grand Plan

- Create a collaboration between CCHS HF Program, multiple SNF’s and the Visiting Nurses Association (VNA)
- Provide remote, centralized monitoring of HF Patients using telemonitoring technology
  - Telemonitor kiosks provided by the HF Program
  - Monitoring of telemonitor transmissions provided by VNA RN
- Implement common processes – intake, daily assessment, exception based monitoring, diuretic protocol and treatment plans
- Improve care coordination leading to better outcomes and reduced resource utilization
All-Cause Readmission Rates for HF Patients Discharged to a SNF

- FY '13: 18
- Apr-Sept '14: 17.69

Readmission Rates

Action Plan

- We engaged 6 local SNF’s from 3 different companies
- Each SNF agreed to utilize a common intake process to identify heart failure patients and gather baseline information
- Telemonitoring kiosks were installed at each SNF and each participating patient interact with the kiosk each morning
- All data sent to CCHS VNA for centralized monitoring
- Standard decision tree algorithm utilized by VNA to decide if clinical changes are consistent with worsening CHF (Diuretic Call) or other clinical concerns
- Daily feedback by VNA to each SNF where clinical concerns exist
- Each SNF agreed to use a standard diuretic protocol to manage volume overload
Diuretic Protocol

**Results – VNA Alert Activity**

<table>
<thead>
<tr>
<th>FACILITY</th>
<th># OF PATIENTS</th>
<th>DIURETIC CALLS</th>
<th>CLINICAL CALLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadia Broadmeadow</td>
<td>31</td>
<td>42</td>
<td>110</td>
</tr>
<tr>
<td>Cadia Pike Creek</td>
<td>21</td>
<td>29</td>
<td>61</td>
</tr>
<tr>
<td>Genesis Hillside</td>
<td>6</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Genesis Brackenville</td>
<td>4</td>
<td>11</td>
<td>21</td>
</tr>
<tr>
<td>Manor Care Pike Creek</td>
<td>7</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Manor Care Foulk Rd</td>
<td>4</td>
<td>6</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>73 patients</td>
<td>105 calls</td>
<td>290 calls</td>
</tr>
</tbody>
</table>
**Results – Readmission Rates**

Bar chart showing readmission rates for different categories:
- FY 13 (18)
- Apr-Sept 14 (17.69)
- SNF Project (12.6)

**Analysis**

- 31% Relative risk reduction in readmission rates for monitored patients
- 7 Days per week VNA coverage provided
- Weekly calls with each SNF to manage operational issues and address concerns
Integration of the Heart Failure and Palliative Care Programs, to enhance early identification of high risk heart failure patients, and extend palliative care consultation and interventions to those identified

- Identify patients on the Heart Failure Unit, between March-July 2014, who are at increased risk of one year mortality utilizing a prognostic risk tool

- Develop and implement a supportive care algorithm to achieve earlier more appropriate interventions
The Numbers....again!

5.1 million people are diagnosed with heart failure

825,000 new cases of heart failure are diagnosed annually

50% of patients with heart failure will die within 5 years of receiving the diagnosis

Less than 10% of patients with heart failure receive palliative services¹

The ACC/AHA support involvement of palliative care teams to help patients and families decide when end-of-life care (including hospice) is appropriate

"Data suggest that advance directives specifying limitations in end-of-life care are associated with significantly lower levels of Medicare spending, lower likelihood of in-hospital death, and higher use of hospice care²"

The National Institutes of Health (NIH) is currently funding 7 projects in the area of palliative care and heart failure:

- The National Institute of Nursing Research (NINR) is funding 4 trials to improve symptoms and quality of life for heart failure patients and families
- The National Heart, Lung and Blood Institute (NHLBI) is funding 2 trials exploring ways to improve decision making and communication in patients with heart failure
- The National Institute of Aging (NIA) is supporting one study to assess the effect of palliative care on the utilization and costs of older adults with heart failure

- Review of literature reveals that health care providers equate palliative care to end-of-life/hospice care
- Primary Care Providers and Cardiologists often lack an understanding of palliative care guidelines
- The ACCF/AHA Guidelines for the Management of Heart Failure list Palliative Care interventions as a Class 1B recommendation³

2. 2013 ACCF/AHA Guideline for the Management of Heart Failure
3. 2013 ACCF/AHA Guideline for the Management of Heart Failure
Benefits of Integrating Palliative Care Services into the Heart Failure Program

- High level advanced care planning that is based on the patient's goals of care and preferences
- Assessment and treatment of distressing symptoms including: dyspnea, pain and depression
- Effective family conferences that allow for shared decision-making between the family and the medical team
- Psychosocial and spiritual support
- Assessment of quality of life
- Establishment of DNR status and/or referral to hospice in select patients

The Joint Commission recognizes the value of advanced care planning for patients diagnosed with heart failure. Advanced HF certification requires:
1. Documentation of a discussion regarding goals of care
2. Placing a copy of an executed advanced directive on the medical record

Palliative Care interventions for patients hospitalized with heart failure at Christiana Care Health System (CCHS) historically have been very low
- Our team's pilot was conducted March-July 2014
- To establish a baseline: data was obtained during that same time period, one year earlier
- Baseline Data: March-July 2013
  - Palliative Care consults for HF patients averaged only 2.5%
  - Timing of a Palliative Care consult was often delayed, occurring on average at hospital day #5
  - Referrals to hospice for end stage HF patients was 4.5%

Among Medicare recipients nationally, patients with heart failure who enrolled in hospice in the last 6 months of life was 38%
- Of those, 1/3 remained enrolled for only a week or less

CCHS has very successful Heart Failure and Palliative Care Programs; but integration of the two is lacking, and high risk HF patients were potentially not receiving appropriate palliative care interventions

1. Identify heart failure patients at high risk of mortality, utilizing a prognostic risk tool


2. High risk score (>6) generates Palliative Care consult

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex male</td>
<td>1 point</td>
</tr>
<tr>
<td>1-2 dependent activities of daily living (ADLs)</td>
<td>2 points</td>
</tr>
<tr>
<td>3 or more dependent ADLs</td>
<td>4 points</td>
</tr>
<tr>
<td>Read failure</td>
<td>2 points</td>
</tr>
<tr>
<td>Cancer local</td>
<td>3 points</td>
</tr>
<tr>
<td>Cancer metastasis</td>
<td>5 points</td>
</tr>
<tr>
<td>Renal impairment - Creatinine &gt;2.0</td>
<td>2 points</td>
</tr>
<tr>
<td>Poor nutritional index - Albumin &lt;3.5</td>
<td>1 point</td>
</tr>
<tr>
<td>Poor nutritional index - Albumin &lt;3.0</td>
<td>2 points</td>
</tr>
</tbody>
</table>

2. Develop and Implement a Supportive Care Algorithm

1. To achieve earlier more appropriate interventions

3. Consult Palliative Care team

* Discuss Goals of Care
* Assess quality of life
* Symptom control

* Psychosocial and spiritual support
* Establish DNR status
* Referral to Hospice services in select patients

Supportive Care Algorithm
July-March 2014: 315 Heart Failure patients were stratified using the Walter Index: a prognostic tool to assess increased risk of one year mortality. Patients with a score of ≥6 received a palliative care consultation.

50 patients met criteria for consultation.

Patients with a higher mortality risk score (and received palliative consultation) primarily were discharged with home health services, skilled nursing, or hospice care. Patients with a lower mortality risk score primarily were discharged to home or home with health services.

Palliative Care interventions for Heart Failure patients increased from a baseline 2.5% to 19%.

Documentation of Goals of Care occurred earlier in the hospital stay for HF patients evaluated by Palliative Care 3.68 days vs 5.56 days!!
Hospice referrals for the most acute end stage heart failure patients increased 112% from baseline.

5E HF Patients Discharged to Hospice Care

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% of patients</td>
<td>4.5%</td>
<td>9.5%</td>
</tr>
</tbody>
</table>

112% increase p = 0.0011

• Staff (MDs, PAs, NPs, RNs) were surveyed regarding the Supportive Care Pilot.
• “Establishing goals of care” and “Addressing other symptoms” were the two most valued aspects of the pilot.

Q7: Rank the value of the Supportive Care Services to your patient care. (1 is most valuable, 7 is least valuable)

- Establishing goals of care
- Addressing symptom
- Referrals to Hospice
- Meetings with family
- Overall patient care

Results

- No consult
  - N=11
  - 4.20% 30-Day Readmission
  - N=11
  - 3.80% 7-Day Readmission

- P&P
  - N=2
  - 15.50% 30-Day Readmission
  - N=8
  - 15.40% 7-Day Readmission

- There was no statistical significance in 7 and 30-day readmission rates between the two groups.
- Patients seen by P&P represent a sicker population with higher one year mortality scores, therefore, readmission rates that were not any WORSE in the higher risk group is encouraging and may possibly reflect a benefit of the P&P intervention.
- Further research and studies are necessary.
During the pilot, 315 patients with heart failure were screened on 5E

- 50 patients met criteria for referral to the Palliative Care team (via prognostic risk score for increased one year mortality)
- **Referrals to palliative care averaged 19%,** a significant increase from a baseline of 2.5%
- **Enrolled patients were seen earlier in their hospital stay** by the Palliative Care team, as compared to the timing of baseline palliative care consults (3.68 days vs 5.56 days)
- Referrals to hospice for appropriate end stage HF patients increased to 9.5% from 4.5% (**a 112% increase!**)
- Enrolled patients (a sicker population) were appropriately discharged with additional health services, i.e.: home healthcare, skilled nursing, or hospice
- Staff who were surveyed responded favorably to the palliative care interventions
- We were unable to demonstrate a statistically significant change in mortality, length of stay, or 7 and 30 day readmission rates for this very short pilot

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**Trend in Palliative Care Consults on 5E Heart Failure Patients**

- Average 9.3%
Background Knowledge

- Cognitive impairment (CI) is highly prevalent in patients identified as having high readmission rates; and chronic illnesses such as HF are associated with high readmission rates.\(^1\),\(^2\)

- Patients with CI have been shown to have poor adherence with their medical management plan; this is more predominant when the patient/family has not recognized the CI problem.\(^3\),\(^4\)

- Recognition rates for CI by medical practitioners have been documented to be astonishingly poor, averaging about 10% to 20%.\(^2\)

- Self-care (ie, prescription renewals, pill-taking, symptom-monitoring, and coping) may be beyond the cognitive ability of these (HF)patients to do consistently and reliably.\(^3\),\(^4\)

\(^1\)Medicare Payment Advisory Commission’s Report to Congress, June 2007
**Behavioral Health Consultation**

**Reason for Referral**
Heart failure patient, third (or more) readmission this year

**Mental Status Exam**
- Appearance
- Attitude
- Behavior
- Affect
- Insight
- Judgment
- Orientation: to person/place/situation

**Screens and Assessments**
- PHQ-9: depression score
- GAD-7: anxiety score
- CAGE-AID: substance abuse score
- MOCA: cognitive impairment score

**Psychosocial History**
- Psychiatric History: previous/current treatment, diagnoses, medications
- Social Support: lives alone or with (name, relationship)
- Adherence: assessment of agreement with and understanding of treatment plan

**Impression**

**Plan/Recommendations**

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**GAD-7 Anxiety Screen**

**MOCA Assessment, CAGE-AID**

<table>
<thead>
<tr>
<th>Generalized Anxiety Disorder Screener (GAD-7)</th>
<th>Not at all</th>
<th>Several Days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feeling nervous, anxious or on edge</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Not being able to stop or control worrying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Worrying too much about different things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Trouble relaxing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Being so restless that it is hard to sit still</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Becoming easily annoyed or irritated</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Feeling afraid as if something awful might happen</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Add columns: Total Score

8. If you checked off any problems, how difficult have these problems made it for you to do your work, to take care of things at home, or get along with other people?

<table>
<thead>
<tr>
<th>Not difficult at all</th>
<th>Somewhat difficult</th>
<th>Very difficult</th>
<th>Extremely difficult</th>
</tr>
</thead>
</table>

When did the symptoms begin?
Initial Project Take-Aways

- Most patients have at least mild cognitive impairment and expressed “surprise” in the diagnosis; that was the first time they had been told that. Some felt relieved to hear the diagnosis.
- Less depression has been identified, than what was expected; but high distress identified—such as in an adjustment disorder.
- No interventions have occurred to date as a result of the patient assessments
- Good way to identify high risk patients—ongoing
- Patients were given Outpatient contact information for each provider so they can call with further questions, clarifications, or to be seen in the Outpatient area.
- Community referral sources were provided to some of the patients.
- None of these patients would have been seen otherwise by the Behavioral Health team!!

Pink Highlighter Project

While we have done an excellent job making sure that patients HAVE follow-up appointments...

NOW we need to try to help GET patients there!

Make the 7-day follow-up appointment STAND OUT by highlighting in PINK highlighter!

**If the patient needs the appointment moved, make sure that it remains within the 7-day time frame!!

Increase Follow-up Appointment Attendance

Let’s increase patients’ awareness of their follow up appointments.

Grab a PINK highlighter and highlight the next scheduled appointment on the Discharge Instructions sheet.

Highlight here...

So the patient follows-up there...