Overview

• Why Focus on Readmissions?
• FHA Readmission Collaborative
• Readmission Metrics
• BayCare Health System: Identifying Opportunities & Implementing Improvements
Why Focus on Readmissions?

• Quality improvement opportunity
  – Provide care at the right place and the right time
  – Nationally, 25% of Heart Failure patients, 20% of Heart Attack patients, and 18% of Pneumonia patients are readmitted within 30 days of discharge
Why Focus on Readmissions? (cont.)

• Publicly reported readmission rates
  – Centers for Medicare and Medicaid Services (CMS)
    • Readmission rates for three conditions: Acute Myocardial Infarction (AMI), Heart Failure (HF) or Pneumonia (PN)
  – Florida’s Agency for Health Care Administration (AHCA)
    • Readmission rates for > 70 conditions and procedures
Why Focus on Readmissions? (cont.)

• Health care reform and value based purchasing
  – Legislation, rules and regulations discuss bundled payments (acute and subacute care)
  – Specific focus on reducing payments for readmissions
  – Commercial payers already declining payment for readmissions
Health Care Reform and Readmissions

- FY 2013 (Oct ’12) – CMS will reduce payments for readmissions higher than expected
- Penalty is 1% of all DRG payments, not just the clinical areas measured, increasing to 3% in FY 2015
- Anticipated to save Medicare $7.1B over 10 years
FHA Readmission Collaborative

• Support AHCA’s public reporting of PPR rates and improve quality of care by reducing readmissions

  – Develop recommendations for public reporting, including use of 3M Potentially Preventable Readmission (PPR) methodology to identify clinically related events

  – Identify key opportunities for improvement

  – Identify best practices for reducing readmissions

  – Forum for knowledge sharing
# Readmission Metrics: Florida PPR and CMS

<table>
<thead>
<tr>
<th>Types of readmissions</th>
<th>Florida HealthFinder: 3M Potentially Preventable Readmissions (PPR)</th>
<th>HospitalCompare: Risk Standardized Readmission Rate (RSSR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days</td>
<td>15 days</td>
<td>30 days</td>
</tr>
<tr>
<td>Reasons</td>
<td>Related to the same or related to original admission</td>
<td>Readmission for any reason</td>
</tr>
<tr>
<td>Payer/patient</td>
<td>All payer categories (Ages 18+)</td>
<td>FFS Medicare, Age 65 and older who have a complete claims history for 12 months</td>
</tr>
<tr>
<td>Time period</td>
<td>12 months</td>
<td>3 years</td>
</tr>
<tr>
<td>Adjustments</td>
<td>3M APR DRG and Severity of Illness Subclass</td>
<td>Hierarchical Regression Model</td>
</tr>
<tr>
<td>Can hospitals reproduce?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Terms used</td>
<td>Lower/higher/As Expected</td>
<td>Better than, no different, worse</td>
</tr>
<tr>
<td>Benchmark</td>
<td>Florida statewide readmission rate</td>
<td>Florida vs. US National Rate</td>
</tr>
<tr>
<td>Minimum number of cases</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Conditions/Procedures</td>
<td>70 conditions and procedures</td>
<td>Heart attack, heart failure, pneumonia</td>
</tr>
</tbody>
</table>
## FHA Readmission Collaborative – Measures and Goals

### Five Focus Areas – Using 3M PPR:

<table>
<thead>
<tr>
<th></th>
<th>Mar’08</th>
<th>Mar ’09</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Failure</td>
<td>13.3%</td>
<td>12.6%</td>
<td>&lt;8%</td>
</tr>
<tr>
<td>Heart Attack</td>
<td>12.8%</td>
<td>10.5%</td>
<td>&lt;6.5%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>7.5%</td>
<td>6.8%</td>
<td>&lt;4%</td>
</tr>
<tr>
<td>Bypass Surgery</td>
<td>12.6%</td>
<td>12.6%</td>
<td>&lt;8%</td>
</tr>
<tr>
<td>Hip Replacement</td>
<td>5.7%</td>
<td>5.6%</td>
<td>&lt;2.5%</td>
</tr>
</tbody>
</table>

Goal is to achieve the target readmission rates by December 31, 2010
# 3M PPR Methodology: General Guidelines

<table>
<thead>
<tr>
<th>Initial Discharge</th>
<th>Medical</th>
<th>Surgical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical</td>
<td>PPR except if clearly unrelated acute events</td>
<td>Not PPR unless initial medical diagnosis clearly should have resulted in surgery</td>
</tr>
<tr>
<td>Surgical</td>
<td>PPR except conditions clearly unrelated</td>
<td>PPR if related to complications of prior surgery</td>
</tr>
</tbody>
</table>
If any of the following conditions apply to the initial discharge, a subsequent readmission is excluded from consideration as a PPR

- Died
- Major or metastatic malignancies
- Neonates
- Multiple trauma, burns
- Left against medical advice
- Transferred to another acute care hospital
- Obstetrical
- Other exclusions:
  - Specific eye procedures and infections
  - Cystic fibrosis-pulmonary diagnosis
3M PPR: Example of Relationships

Case 1: PPR
Initial discharge: Asthma
Readmission 8 days post discharge: Asthma

Case 2: PPR
Initial discharge: Acute MI
Readmission 6 days post discharge: Diabetes Mellitus

Case 3: Not a PPR
Initial discharge: Pneumonia
Readmission 4 days post discharge: Fractured femur & skull from MVA

Case 4: Not a PPR
Initial discharge: CHF
Readmission 6 days post discharge: Appendectomy

Case 5: PPR
Initial discharge: Abdominal Pain
Readmission 2 days post discharge: Appendectomy
Monitoring Readmissions

• Identify timeframe of interest
  – 7 days, 15 days, 30 days

• Select patient identifier - examples
  – Medical Record Number – unique to person and hospital
  – Unique patient identifier – unique to person regardless of location (e.g., SSN, Medicare Beneficiary Number)

• Linkage - all-cause vs. potentially preventable and clinically related
  – Evaluate inclusion and exclusion criteria – age, conditions
Monitoring Readmissions (cont.)

All Patients Discharge Alive

Patients Readmitted Within 30 Days – All Cause (no exclusions) - CMS

Patients Readmitted Within 30 Days for Clinically Related Reasons (PPR)

Patients Readmitted Within 15 Days for Clinically Related Reasons (PPR) - AHCA

“Real Time” – Identify Patients Readmitted < 7 days

All Patients

Discharge Alive

Patients Readmitted Within 30 Days
• Ideally use 3M APR-DRG and PPR software

• If not yet available, consider enhancing internal monitoring by
  – Exclude discharge disposition died, AMA, transfer to another acute care
  – Exclude readmission episodes for conditions such as trauma, OB, major malignancies, transplants
  – Evaluated potentially preventable and clinical relationships
    • Medical followed by medical
    • Surgical followed by medical
    • Surgical followed by surgical if potential complication
BayCare Health System - Identifying Opportunities

- Evaluate all patients within the system
  - Linkage by corporate patient identifier to identify readmissions to any BayCare hospital

- Apply the 3M PPR software to quarterly data files
  - Standard administrative data input file with patient demographics, diagnoses, present on admission flags, procedures, procedure dates, etc.
  - Run data from 30 days before and 30 days post the quarter of interest
  - Use 30 day period to identify clinically related chains, then flag those patients whose initial readmission occurred within 15 days
  - Evaluate all PPR’s not just those selected for AHCA reporting

- Reconciliation remains a challenge

- Initial analysis showed major opportunities
Major Diagnostic Category of Initial Admission

Data on Potentially Preventable Readmissions within 30 days
## Top 5 APR-DRGs of Initial Admission

<table>
<thead>
<tr>
<th>Rank</th>
<th>All Cases</th>
<th>Medicare</th>
<th>Other Payers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Description (%)</td>
<td>Description (%)</td>
<td>Description (%)</td>
</tr>
<tr>
<td>1</td>
<td>HEART FAILURE (194)</td>
<td>4.7</td>
<td>HEART FAILURE (194)</td>
</tr>
<tr>
<td>2</td>
<td>CHRONIC OBSTRUCTIVE PULMONARY DISEASE (140)</td>
<td>4.4</td>
<td>CHRONIC OBSTRUCTIVE PULMONARY DISEASE (140)</td>
</tr>
<tr>
<td>3</td>
<td>OTHER PNEUMONIA (139)</td>
<td>2.9</td>
<td>KIDNEY &amp; URINARY TRACT INFECTIONS (463)</td>
</tr>
<tr>
<td>4</td>
<td>SCHIZOPHRENIA (750)</td>
<td>2.8</td>
<td>OTHER PNEUMONIA (139)</td>
</tr>
<tr>
<td>5</td>
<td>KIDNEY &amp; URINARY TRACT INFECTIONS (463)</td>
<td>2.5</td>
<td>SCHIZOPHRENIA (750)</td>
</tr>
</tbody>
</table>

Prevalence conditions of Heart Failure, COPD, Pneumonia, Kidney & Urinary Track Infections, Depression and Schizophrenia
Discharge Status of Initial Admission

Significantly higher than expected:
- SNF & ICF
- Home Health Care
- Rehab or LTAC

Data on Potentially Preventable Readmissions within 30 days
Days from Initial Discharge to First Readmit

All Cases: Median = 11 days, Mean = 12.31
Medicare FFS: Median = 11 days, Mean = 12.39

Data on Potentially Preventable Readmissions within 30 days
• PPR data is only available quarterly so case managers use a proxy system to evaluate every patient readmitted within 24 to 48 hours of discharge

  – Gather data on reason for admission, source of admission, sociodemographic, medical, and system factors

  – Apply major exclusions (e.g., trauma, malignancies)

  – Evaluate clinical relationships and potentially preventable
    • Use diagnoses, procedure codes and MS-DRG to evaluate medical to medical, surgical to medical, etc.

  – Focus on high risk patients who may fall into the “PPR” methodology
BayCare Quality Goal – Reduce Heart Failure Readmissions

• 2010 Quality & Safety Plan goal to reduce the 15 day PPR for Heart Failure (APR-DRG 194).
  – Statewide the rate was 11.21% (Oct 08 to Sep 09)
  – BayCare’s Baseline (2009) = 10.46%
  – Established 2010 Target = 10.12%
  – Progress to date: Q1-10 = 9.87%, Q2-10 = 8.7%, YTD = 9.33%

• Established system-wide Reducing Readmissions Steering committee
  – Representatives from across the system – CNE’s, case management, home health, behavioral health, CQO, black belts
HF Patient Journey

Home
46%

Home Health
23%

Skilled Nursing / LTAC / Hospice
21%
BayCare Health System: Improvement Projects Across the Continuum of Care

<table>
<thead>
<tr>
<th>During Hospitalization</th>
<th>At Discharge</th>
<th>Post Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>• SJH Implementation of Readmission Risk Assessment</td>
<td>• SAH HF Tele-monitoring Project</td>
<td>• BCHS Reduce Readmissions Call Center F/U After Discharge</td>
</tr>
<tr>
<td>• BCHS Improve Invision Documentation of Nursing Home and Home Care Discharge Disposition and admit source</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• SAH and Pinellas Point Nursing Rehab Center Readmissions Collaborative project</td>
<td></td>
</tr>
<tr>
<td>• MPH Project BOOST Inpatient Discharge Planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• BCHS/SJH Development of a Post Acute Care system within Home Care to Reduce Hospital Readmissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• BCHS FHA Readmissions Collaborative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Risk Assessment Tool – initiated on admission to hospital

<table>
<thead>
<tr>
<th>Initial Risk Assessment (Completed by Nurse during admission to unit)</th>
<th>Risk Interventions (Completed during patient’s stay)</th>
<th>Intervention completed by:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Heart Failure Diagnosis</td>
<td>Square</td>
<td>Initials: __________</td>
</tr>
<tr>
<td>Perform associated interventions</td>
<td>Review national discharge guidelines and disease-specific education using Teach-Back with patient/caregiver</td>
<td>Date/Time: __________</td>
</tr>
<tr>
<td></td>
<td>Provide: □ CCTV Programming Guide □ Living w/ Heart Failure booklet</td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>Order Dietary consult if patient needs assistance or is non-compliant with diet</td>
<td>Initials: __________</td>
</tr>
<tr>
<td></td>
<td>Review what to do and who to contact in the event of worsening or new symptoms with patient/caregiver</td>
<td>Date/Time: __________</td>
</tr>
<tr>
<td>2a. Prior Hospitalization</td>
<td>Order Social Worker consult</td>
<td>Initials: __________</td>
</tr>
<tr>
<td>No prior hospitalization in past 90 days</td>
<td>Encourage patient/caregiver to schedule follow-up appointment(s) prior to discharge</td>
<td>Date/Time: __________</td>
</tr>
<tr>
<td>Non-elective hospitalizations within:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ past 30 days □ HF Readmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 31 to 60 days □ HF Readmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 61 to 90 day □ HF Readmission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2b. Patient Support</td>
<td>Evaluate for home care or post acute care facility placement</td>
<td>Initials: __________</td>
</tr>
<tr>
<td>Patient support in place</td>
<td>Provide information on community resources for additional patient/caregiver support</td>
<td>Date/Time: __________</td>
</tr>
<tr>
<td>Absence of Care-giver to assist with discharge and home care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absence of funding for medication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recent HF readmission rates for St. Anthony’s Hospital patients discharged to home are approximately 11% – 12% while patients discharged to Skilled Nursing Facilities (SNF) are 22%.

The variation between these two populations indicate an opportunity to decrease readmissions. (project includes all diagnoses).
## Critical to Quality Design Requirements

**Quality Function Deployment (QFD)**

| Direction of Improvement | Importance | Action - Clearly defined action steps and due dates | Patient - Reduce hospital readmissions improving patient satisfaction | Communication - Effective and standard communication (transfer and continuation of care) | Physician - Physician project engagement | Team Member - Clearly defined team member expectations (education, training, communication and documentation) | Medication - Effective and pro-active medication monitoring | Weight - Consensus of how often patient weighed with standard documentation and early recognition of potential issue | Regulatory - Regulatory requirements (Internal & External) | Customer - Consistent customer experience (transfer) | Documentation - Standard and efficient documentation | Patient Family - Timely and effective clinical communication with patient family | Expansion - Expandability (BayCare and Southern HealthCare Mgmt) | Patient Status - Timely recognition of change in patient status and immediate physician engagement |
|--------------------------|------------|----------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
|                          |            | 10 1 1 1 1 1 1 1 9 9 9 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 10 9 9 9 9 9 9 9 3 3 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 | 10 1 1 1 9 9 9 9 9 9 |

**Technical Importance**

<table>
<thead>
<tr>
<th>Importance</th>
<th>Absolute</th>
<th>Relative (%)</th>
<th>Constraints</th>
<th>Regulatory requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>452</td>
<td>452</td>
<td>9</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>1044</td>
<td>1044</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>924</td>
<td>924</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>
Sepsis Screening Tool Implementation
Pinellas Point Nursing and Rehab Center

Sepsis Screening Tool – Pinellas Point Nursing & Rehab Center
*Confidential*

Patient Name: ___________________ Date Completed: ____________

Patient Identification Number: ___________________

Instructions: RN/LPN’s should complete this screening tool every 6 hours during routine data collection of all patients.

Are two or more of the following indicators a change from the previous shift assessment?

0800 AM
- Temperature (T): 100°F
- Respiratory Rate (RR): >20
- Pulse Oximetry (SpO2): <90%
- Blood culture positive
- Vitals outside normal range
- Temperature (T): 101°F
- Respiratory Rate (RR): >20
- Pulse Oximetry (SpO2): <90%
- Blood culture positive
- Vitals outside normal range

1200 Midday
- Temperature (T): 100°F
- Respiratory Rate (RR): >20
- Pulse Oximetry (SpO2): <90%
- Blood culture positive
- Vitals outside normal range
- Temperature (T): 101°F
- Respiratory Rate (RR): >20
- Pulse Oximetry (SpO2): <90%
- Blood culture positive
- Vitals outside normal range

No change

No change

No change

No change

No change

Two or more boxes checked (acute symptoms) in any one shift indicates a possible New infection and is considered a POSITIVE screen.

Positive screening
ACTION REQUIRED
2 or more signs and symptoms from one shift

Positive screening IMMEDIATELY:

☐ Initiate Sepsis Protocol: Date _______ Time _______

☐ Call attending physician: Date _______ Time _______

Medical Director Orders: __________________________

*This is not part of the permanent medical record*
Issued 09/24/07
Implemented Solutions

• Sepsis Screening Tool at Pinellas Point Nursing and Rehab Center including education and training (signs and symptoms) (1-15 day of stay)

• Standard lab testing 3 days admitted to ECF for CBC and CMP (WBC included in CBC)

• Standard St. Anthony’s checklist for documentation required for SNU/ECF review (to be used by Unit Secretaries/Social Workers)

• Accountability for completed checklist (engage project champion) including education and training

• Liaisons have electronic BEACON access to patient record at St. Anthony’s Hospital in Utilization Management – 4th floor (Case Managers/Social Workers)
Reducing Readmissions for Hip Replacements – 15 day PPR

• Current FL Rate = 5.6%
• BayCare = 6%
  – 20% readmitted within 3 days, 37% within 4 days, 55% by day 7

• Day of Week: No relationship between discharge day of week and readmission within 15 days (p = 0.07)
• Risk Factors / AHRQ Comorbidity Categories: Patients significantly more likely to be readmitted (p value of <= 0.5):
  – Heart Failure – 11.5%
  – Valve Disease – 11.8%
  – Pulmonary/Circulatory Disease – 17.9%
  – Renal Failure – 14.8%
  – Lytes – 9.2%

• Number of Comorbidities: Readmitted patients = mean of 3.01 vs 2.35 for patients not readmitted (p < 0.00)
Reducing Readmissions for Hip Replacements – 15 day PPR (cont.)

• **Length of Stay:** Patients who were readmitted had a longer length of stay initially (mean = 6.12 days vs. 4.54 days for patients not readmitted, \( p = 0.001 \))
  – Longer length of stay likely related to complexity of patients (e.g., higher number of comorbidities and/or potential complications)

• **Age:** Readmitted patients were older (mean age of 75.9 yrs vs. 72.47 yrs for patients not readmitted, \( p = 0.03 \))

• **Gender**
  – No relationship between readmissions and patient gender
Establishing FHA Workgroup to Reduce Hip Replacement Readmissions

- Collaborative with Orthopedic Society
- Initial focus:
  - Reviewing data
  - If other hospitals are similar to BayCare hospitals, the opportunities are in managing patient’s medical conditions when hospitalized for hip surgery, infections are not the issue
  - Need to collaborate with surgeons and primary physicians
Questions?