Reducing Hospital Readmissions for Community Hospitals

featuring

Catherine Koppleman, R.N., CNO
University Hospitals, Cleveland

Shauna Roberts, M.D.
Truman Medical Centers, Kansas City
Examining the Drivers of Readmissions and Reducing Unnecessary Readmissions for Better Patient Care
Unplanned readmissions related to the initial stay likely offer the best opportunity for savings and care improvements.

### A Framework for Classification of Readmissions

<table>
<thead>
<tr>
<th></th>
<th>Related to Initial Admission</th>
<th>Unrelated to Initial Admission</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planned Readmission</strong></td>
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</table>

Source: American Hospital Association.
The effect of socioeconomic factors raises questions about using readmissions to measure quality.

**Community Characteristics and Hospital Quality Measures for a Suburban and an Urban Community**

<table>
<thead>
<tr>
<th>Community Characteristics</th>
<th>Fairfield, CT</th>
<th>Bronx, NY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Population</td>
<td>895,030</td>
<td>1,391,903</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$80,020</td>
<td>$34,031</td>
</tr>
<tr>
<td>Persons Below Poverty Line</td>
<td>7%</td>
<td>27%</td>
</tr>
<tr>
<td>Non-Hispanic White Population</td>
<td>70%</td>
<td>13%</td>
</tr>
<tr>
<td>No English Spoken at Home (aged ≥5)</td>
<td>24%</td>
<td>53%</td>
</tr>
<tr>
<td>Bachelor Degree or Higher (aged ≥25)</td>
<td>40%</td>
<td>15%</td>
</tr>
</tbody>
</table>

**Hospital Quality Data**

<table>
<thead>
<tr>
<th>Hospital Quality Data</th>
<th>Fairfield, CT</th>
<th>Bronx, NY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitals in County with Quality Data on CMS Hospital Compare Site</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Hospitals with <strong>HF Discharge Instruction Rate Better</strong> than the U.S. Avg</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Hospitals with <strong>HF Readmission Rate Significantly Worse</strong> than U.S. Avg</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Hospitals with HF Mortality Rate Significantly Worse than U.S. Avg</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>


Note: HF=Heart Failure.
Hospital Re-admissions
University Hospitals

Catherine S. Koppelman, RN, MSN, NEA-BC
Chief Nursing Officer, UH & UH/CMC
November 21, 2011
Framework for Categorizing Readmissions

<table>
<thead>
<tr>
<th>Classification of Readmissions</th>
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Public policy efforts aimed at reducing readmissions should begin by identifying and focusing on the group of **unplanned, related** readmissions for which the greatest opportunity exists for hospitals to take actions that may prevent the occurrence of readmissions.
# AHA Box Analysis Heart Failure Readmissions

**UH Wholly Owned Hospitals**

## Related to Initial Admission

<table>
<thead>
<tr>
<th>Planned Readmission</th>
<th>2009 Q1-Q2: 6.5% of cases (9 / 138)</th>
<th>2008: 3.1% of cases (10 / 319)</th>
<th>2007: 2.1% of cases (7 / 331)</th>
<th>2006: 3.5% of cases (12 / 341)</th>
</tr>
</thead>
</table>

## Unrelated to Initial Admission

<table>
<thead>
<tr>
<th>Planned Readmission</th>
<th>2009 Q1-Q2: 4.4% of cases (6 / 138)</th>
<th>2008: 3.5% of cases (11 / 319)</th>
<th>2007: 2.7% of cases (9 / 331)</th>
<th>2006: 2.6% of cases (9 / 341)</th>
</tr>
</thead>
</table>

## Unplanned Readmission

<table>
<thead>
<tr>
<th>Unplanned Readmission</th>
<th>2009 Q1-Q2: 44.9% of cases (62 / 138)</th>
<th>2008: 50.8% of cases (162 / 319)</th>
<th>2007: 47.1% of cases (156 / 331)</th>
<th>2006: 44.6% of cases (152 / 341)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Unplanned Readmission</th>
<th>2009 Q1-Q2: 44.2% of cases (61 / 138)</th>
<th>2008: 42.6% of cases (136 / 319)</th>
<th>2007: 48.1% of cases (159 / 331)</th>
<th>2006: 49.3% of cases (168 / 341)</th>
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</table>
UH System Analysis 2009

- Box classification – CMC/all community hospitals - 2008
- Top 5 DRG re-admissions
- System trends
  - Heart failure
  - Pneumonia
  - Chronic obstruction pulmonary disease
  - Psychosis
- Hospital specific
Organization-wide Approach

• System-wide retreat
• Three-month period – analysis
  • Retrospective review
  • Concurrent data collection
• Follow-up system-wide retreat
  • Trends specific to DRG group
  • Trends across all patient groups
• AHA – interventions suggested to decrease re-admits
# UH System Analysis

## Nationally Reported Readmission Outcomes

### 3rd Qtr 2005 – 2nd Qtr 2008 Discharges

<table>
<thead>
<tr>
<th></th>
<th>UH Geauga Medical Center</th>
<th>UHHS Bedford Medical Center</th>
<th>UHHS Memorial Hospital of Geneva</th>
<th>UHHS Richmond Heights Hospital</th>
<th>University Hospitals Conneaut Medical Center</th>
<th>University Hospitals of Cleveland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Chardon, OH</td>
<td>Bedford, OH</td>
<td>Geneva, OH</td>
<td>Richmond Heights, OH</td>
<td>Conneaut, OH</td>
<td>Cleveland, OH</td>
</tr>
<tr>
<td>Setting Type</td>
<td>Acute Care</td>
<td>Acute Care</td>
<td>Critical Access</td>
<td>Acute Care</td>
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<td>Acute Care</td>
</tr>
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<tr>
<td>Rate of Readmission for Heart Attack Patients</td>
<td>No Different than the U.S. National Rate</td>
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<td>Number of Cases Too Small</td>
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<td>No Different than the U.S. National Rate</td>
</tr>
<tr>
<td>Rate of Readmission for Heart Failure Patients</td>
<td>No Different than the U.S. National Rate</td>
<td>Worse than the U.S. National Rate</td>
<td>No Different than the U.S. National Rate</td>
<td>No Different than the U.S. National Rate</td>
<td>No Different than the U.S. National Rate</td>
<td>Worse than the U.S. National Rate</td>
</tr>
<tr>
<td>Rate of Readmission for Pneumonia Patients</td>
<td>No Different than the U.S. National Rate</td>
<td>Worse than the U.S. National Rate</td>
<td>Worse than the U.S. National Rate</td>
<td>No Different than the U.S. National Rate</td>
<td>No Different than the U.S. National Rate</td>
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Organization-wide Approach

UH System Re-admission Structure

Re-admission Steering Committee

System Subcommittees

Heart Failure
R. Rowell/Dr. Fang

MI
R. Rowell/Dr. Mohan

COPD
R. Rowell/Dr. Dassnbrook

Pnuemonia
R. Rowell/Dr. Dassnbrook

Psychiatry
L. Locke w/Dr. Ronis

Re-admission Trends
C. Koppelman/Dr. Anderson

Hospital Specific

Geneva
UTI

Conneaut
Resp.

CMC
Sickle Cell

Geauga
Ortho

Bedford
UTI

Richmond
Renal

Post Surgical Infection

OB/GYN

Renal

Resp.
System Trends/Improvements

• Trends for all hospitals

• 3 categories
  • Discharge planning
  • Insurance/financial
  • Physician-related
System Trends/Improvements

• Discharge planning
  • Interdisciplinary team effectiveness
  • Under utilization of home care
  • End of life care needs
  • Re-admits from extended care facilities

• Improvements
  • Team evaluations + improvement goals
  • Home care algorhythm
  • Structured patient/family meetings
  • Palliative Care Program
  • Senior services/post-acute involvement
System Trends/Improvements

• Insurance/financial
  • Cost of medication
  • Different payors/methods
  • Access to post-acute
• Improvements
  • Issues with commercial payors → corporate contracting
  • Re-admission report by payor source
  • Medication resource guide/education
    • Grand rounds
    • Education of MD’s – ordering meds
System Trends/Improvements

• Physician issues
  • Lack of Primary Care Physicians (PCP)
  • Infection post-procedure
  • Specific MD pattern
  • MD approval – pre-authorized meds

• Improvements
  • Beginning discussion with UHMP
  • Expand Home Care Pilot – surgical population
  • Best practice physician interviews – low re-admits rates
Hospital Re-admission
Heart Failure

Risk screen for re-admits

- Non-adherence to meds
- Low ejection fraction
- Advanced heart failure – not keeping appointment
- New diagnosis of heart failure
- Lack of social supports
Hospital Re-admission
Heart Failure

Home Care Pilot
- Re-admission – not home care eligible
- Home care nurse visit
- Abstract presentation – American Heart Association
- IRB research protocol approval
Hospital Re-admission
Heart Failure

Results

• Baseline re-admission 16.7%
• Pilot group 8.9%
• Reduction rate 47%
Hospital Re-admission
Heart Failure

Grant Application
• CMS Innovation Center
• Prevention of re-admissions
  • Partnership – Hospital and Community Agency
  • New program or initiative
  • Root cause analysis and plan
  • Project savings
Hospital Re-admission
Heart Failure

Grant Application

• Prevention of heart failure – re-admissions
• Root cause analysis – Medicare patients
  • 357 patients with cardio renal syndrome
  • 230 re-admission patients (64%) - 6 months
  • 115 re-admission patients (50%) - ≤ 30 days
  • Fluid overload and medication management
Hospital Re-admission Heart Failure

Grant Application

• Partnership with Community Dialysis Center
• New program/model of care
  • RED – Re-engineered discharge
  • TCM – Transitional care model
• UH/CMC – Discharge advocate
• CDC – Transition care coordinator
• Continuum based plan of care/database
Hospital Re-admission
Heart Failure

Grant Application

• 230 patients – target for intervention
• Decrease 116 re-admits by 25%
• Cost - $209,300/$910 per patient
• Reduction of 29 re-admits - $14,981/case
• Net savings to CMS - $212,404
Hospital Re-admission
Pneumonia and COPD

• Home Care Pilot – October 2011
• Pulmonary Rehab Program – certification
• RN office visit – post discharge
• Risk screen implemented
• Hand off tool – ICU transfers
Hospital Re-admission
Acute Myocardial Infarction

- RN office visit – chest pain
- Chest Pain Symposium
- Continuing Medical Education – EMS staff
- Concurrent review of all patients
Hospital Re-admission Psychosis

• Care Coordination conference pilot
  • In-patient team
  • Community/managed care provider
  • 80% reduction in re-admissions
• Enhanced transition care – nursing homes
• Next day follow-up care – phone contact
# Nationally Reported Readmission Outcomes

**HQA Report / CMS Hospital Compare**  
3Q 2007 – 2Q 2010 Discharges

<table>
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<tr>
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<th>Conneaut Medical Center</th>
<th>Case Medical Center</th>
</tr>
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<tbody>
<tr>
<td>Heart Attack</td>
<td>Equals National</td>
<td>No Different than U.S. National Rate</td>
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<td>Pneumonia</td>
<td>No Different than U.S. National Rate</td>
<td><strong>Worse than National</strong></td>
<td>No Different than U.S. National Rate</td>
<td>No Different than U.S. National Rate</td>
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Hospital Re-admission
All Patients – Care Coordination

Transformation Initiative
• Re-design of care coordination model
• Core teams
  • RN Care coordinator
  • Case manager
  • Social worker
• Education/team development/accountability
• Continuum based approach/program development
Readmissions:

*Truman Medical Centers takes a Multi-pronged Approach to a Multi-dimensional Challenge*
Readmissions: Key Points From Literature

• Expense for acute care: higher for those with chronic conditions (AARP)
• Strongest predictor of readmission: chronic disease (Mudge)
• Socio-demographics
  – African Americans higher rate of readmission (Allaudeen)
  – KC African-Americans more likely to live in poverty, die or lose years of life from chronic conditions, or experience worse maternal and child health outcomes (Lewin)
  – African Americans more likely to have heart failure, more severe forms, at a younger age, get worse faster, have more hospital visits and die from HF (Bibbins)
  – African Americans 35% more likely to be discharged with diagnoses of heart or circulatory issue than Caucasians (MU KC regional chart book)
  – Chronic illnesses disproportionately affect low-income, minority populations
Readmissions:

**Equity Quality Improvement Collaborative**

**TMC’s Goals:**

- Capture and report accurate Race/Ethnicity/Language (R/E/L), all sites
- Achieve 95% on Acute Myocardial Infarction (AMI) and Heart Failure (HF) Measures of Ideal care
- Refer 75% or more of AMI patients to an outpatient cardiac rehab program
- Reduce Heart Failure readmissions

**Changes made to meet the goals:**

- Order sets for AMI (including Cardiac Rehabilitation) and HF care
- Physician education on documenting when AMI or HF diagnosis is unclear
- Opened TMC Cardiac Rehabilitation Center
- Standardized R/E/L categories in the registration system
- Implemented process for capturing and recording patient self-identified R/E/L (asked physicians not to dictate R/E/L)

EQIC is a Robert Wood Johnson Foundation (RWJF) program that aims to help targeted communities achieve goals to improve quality of care in ways that matter to patients and their families.
HF – Enhanced Education and Transition to Home – PILOT PI Project: Telemetry Unit

Enhanced Education

- **HF Discharge Instructions to meet Core Measure Requirements**
  - Created a nursing education care path
  - Created an interactive booklet, initiated as soon as possible after admission, patient can continue to use at home

- **Consults as needed:**
  - **Rehabilitation** - Offer strategies and equipment recommendations that will assist patients in achieving functional mobility and ADL ability at their own baseline
  - **Social Work** - Help patient with adjustment to illness, assist with transition and discharge planning, provide vouchers for scales
  - **Clinical Dietician** - Assess past weights, fluid & caloric needs, help patient verbalize the changes needed when they go home

- **Pharmacy** - Medication education with all HF patients as inpatient, 24 hour post discharge call to Health Coaching patients, dispense scales, identifying lower cost medications

Enhanced Transition to Home

- Introduced Health Coaching (for qualifying patients)
- Follow up with teaching offered at the hospital
- Assist patient to establish self management goals related to lifestyle changes patients need to make at home
- Telephone sessions to reinforce new behaviors

Better Patient Outcomes
- Improved Medication Reconciliation
- Improved Transition to Home
- Improved Patient/Family Education
- Reduced Readmission Rate
Results of Telemetry Pilot Project

While the # of admissions to Telemetry show an upward trend, the # of readmissions show a declining trend!

- # Scales dispensed: 43
- # Ineligible or Declined Health Coaching: 145 (74%)
- # Enrolled in Health Coaching: 29 (14.7%)
- # Successful engagement in Health Coaching: 8 (27%)
- HF-1 Discharge Instructions: 79% (Q4’09) - 91.8% (Q3’10)

Patient Education by Pharmacy
- 159 (92%)
- 13 (8%)

n=172

Patient Understanding of Medication Therapy
- Pre Sep-09: 50%
- Sep-09: 78%
- Oct-09: 83%
- Nov-09: 94%
- Dec-09: 96%
Two Demonstration Projects:
Guided Chronic Care™ (GCC) & Passport to Wellness (P2W)

- Intensive care management team – Nurse and Social Worker
- Team works in the space between visits
- Aim is to empower patients to self manage and use the health system wisely
- Team provides improved continuity for patients through building relationships with them and by mobilizing community resources to help support them
- Nurse and Social Worker customize interventions for the individual patient. For example:
  - Nurse fills pill boxes, reinforces medication education, sorts out medical plan of care
  - Social Worker provides counseling, accesses resources, some home visits
Two Demonstration Projects:  
*Guided Chronic Care™ (GCC) & Passport to Wellness (P2W)*

- Safety-net patients with chronic conditions are often overwhelmed by difficult life situations.
- Coupled with complex medical problems, have trouble engaging with the health system and partnering in management of their conditions.
- Evidenced by low Patient Activation Measurement™ scores.
Assertive Care
Defined by GCC & P2W

• Build a trust relationship with the patient and loved ones
• Assertively move the patient into advocating and managing for themselves to whatever degree they are ready
  – Develop shared goals relevant to the patient’s current self-management level
• Appointment Preparedness Process
• Touch points within 72 hours of ED visit, hospital discharge, or inactive patient re-engagement
• Teach patients to contact the Team directly
• Electronic record automated page notifies Team members when their patients register anywhere in the organization
  – Facilitates consistent support for next steps in care
GCC & P2W:
Descriptive pre-post Statistics

<table>
<thead>
<tr>
<th></th>
<th>Before Intake</th>
<th>After Intake</th>
<th>p-value*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Participants</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ED Visits</td>
<td>87</td>
<td>0.25</td>
<td>0.17</td>
</tr>
<tr>
<td>Hospitalizations</td>
<td>87</td>
<td>0.25</td>
<td>0.09</td>
</tr>
<tr>
<td>Estimated Allowable Charges</td>
<td>85</td>
<td>$1,878</td>
<td>$819</td>
</tr>
</tbody>
</table>

*Since the assumption of a normal distribution was not met in this sample, we used the Wilcoxon signed ranks test for before-after comparisons. In each case, this resulted in a statistically significant reduction in resource use after program enrollment.
TMC Self-Management Support

- Grant funded project, 1st focus on Heart Failure
- With patient input, identified written material and a toolkit to help chronic care patients manage their conditions
- Written materials needed to be short, to the point, culturally appropriate, eye-catching, at a 5th grade reading level
- Developed 20+ of these – flyers, booklets, a calendar, weight and blood pressure tracking sheets
- Toolkit includes bathroom scales, blood pressure cuff, pill box, pill splitter, tote bag, “shoe box” for business receipts and other papers, medicine alarm timer
**What’s an easy way to keep track of my fluids?**

Get a 2 liter (8 cups) water bottle or pitcher and fill it with water.

- Every time you drink fluid, pour an equal amount out of the bottle or pitcher.
- When the bottle is empty, you’ve had all the fluids you can drink for the day.

**1 cup looks like:**

- V8
- Water & ice chips
- Coffee, tea & pop
- Alcohol
- Popscicles
- Kool-Aid
- Soups & broth
- Jello & pudding
- Jell-O & fruits
- Milk & cream
- Gravy
- Ice cream

**Tips to help you from becoming thirsty:**

- Limit your salt to 2000 mg or less per day
- Chew gum or suck on a piece of hard candy
- Rinse your mouth often
- Avoid the heat

**8 cups of FLUIDS looks like one of these:**

- Juice Bottle
- 5 Cans of Soda
- 2 cups of soda (32oz)

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**Reading Medication Labels**

It is important to know exactly what medicines you are taking, for example the name, the dose, and the number of times a day in order to take them correctly.

**Here is an example medicine label:**

- **Drug Name:** St. John’s Wort
- **Dosage:** 1 TABLET 3 TIMES A DAY
- **Form:** CAPSULE
- **Special Instructions:** Store at room temperature. Avoid direct sunlight.
- **Expiration Date:** 05/2013

Please remember that if there has been a change in your prescriptions, you should follow the Medicine Calendar you were given at your last clinic visit, instead of going by what the label on the bottle says.

Also, it can be confusing about when to get prescriptions refilled and how many refills you can still get. Your nurse or pharmacist should explain this to you. But don’t be afraid to ask if it is confusing!”}

You may find a pill splitter useful. Ask your nurse how to use it.
Reducing Readmissions: Conclusions

• Multi-pronged approach recommended
• It’s impressive how sick these patients are
  – Most maintain functional activity
• Critical to success:
  – Assertive Care
  – Taking medications as prescribed
  – Build new systems and approaches to care
  – Support for self-management
• Compliance is not a significant issue, it’s a health care system excuse