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Reducing Avoidable Hospital Readmissions
Providing High Value Care in the Acute Inpatient Setting

Slide 2

Introductions
- Jeffrey Murawsky, MD FACP
- Stephanie Ashman, MD
- Fareed Sheikh, MD
- Angelica Honsberg, MD

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Reducing Avoidable Hospital Readmissions
Providing High Value Care in the Acute Inpatient Setting
The Affordable Care Act requires CMS to reduce payments to IPPS* hospitals with 'excess' readmissions after an admission for one of five diagnoses: acute myocardial infarction, congestive heart failure, pneumonia, COPD and joint replacement surgery.

This program is downside risk only. The best a hospital can do is to have no excess readmissions and retain full reimbursement.

Since 78% of American hospitals in this program are being penalized in FY2015, a hospital may have a better than average rate but still be considered to have 'excess' readmissions and be penalized.

The penalty will vary based on the hospital's performance versus the national performance with the maximum possible penalty being 3% of a hospital's base operating DRG payments and the average penalty being 0.63%.

**Hospital Readmissions Reduction Program: The Basics**

*Medicare Inpatient Prospective Payment System for Acute Care Hospitals*

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**Scope of Readmissions**

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<table>
<thead>
<tr>
<th>Year penalty applied</th>
<th>FY 2013</th>
<th>FY 2014</th>
<th>FY 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance (measurement) period</td>
<td>July 2008 - June 2011</td>
<td>July 2009 - June 2012</td>
<td>July 2010 - June 2013</td>
</tr>
<tr>
<td>Diagnoses of initial hospitalization</td>
<td>Heart attack</td>
<td>Heart failure</td>
<td>Pneumonia</td>
</tr>
<tr>
<td></td>
<td>Heart attack</td>
<td>Heart failure</td>
<td>Pneumonia</td>
</tr>
<tr>
<td></td>
<td>COPD</td>
<td>Hip or knee replacement</td>
<td></td>
</tr>
<tr>
<td>Maximum rate of penalty</td>
<td>1%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Average hospital payment adjustment (among penalized and non-penalized hospitals)</td>
<td>-0.27%</td>
<td>-0.25%</td>
<td>-0.49%</td>
</tr>
<tr>
<td>Average hospital penalty (among penalized hospitals only)</td>
<td>-0.42%</td>
<td>-0.38%</td>
<td>-0.63%</td>
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<tr>
<td>Percent of hospitals penalized</td>
<td>64%</td>
<td>66%</td>
<td>78%</td>
</tr>
<tr>
<td>Percent of hospitals at maximum penalty</td>
<td>8.0%</td>
<td>0.6%</td>
<td>1.2%</td>
</tr>
<tr>
<td>CMS estimate of total penalties</td>
<td>$290 million</td>
<td>$227 million</td>
<td>$428 million</td>
</tr>
</tbody>
</table>

**Penalties for All CMS Hospitals**

Modified from Kaiser Family Foundation
Medicare Readmission Rates Began Falling in 2012
To CMS, the Program is Working

Since a hospital’s penalty is based on its performance relative to other hospitals - hospitals must reduce readmissions to keep up.

Readmission Collaborative Key Learnings

1. Patient & Family Education
   - Use Teach-Back Techniques
   - Identify Key Learners
   - Collaborate with Community Providers

2. Hospital Medicine
   - Improve Discharge Summary
   - Quality & Timing
     - Start Discharge Education at Admission
     - Communicate End of Life Care Issues
     - Add incentives to hospitalists’ contracts

3. Contact Centers
   - Use Contact Centers/MD Navigate to schedule appointments
   - Integrate Care Assure to support follow through after discharge
   - Enhance the hand-off of the care plan

4. Case Management
   - Use Case Management Reports to improve post-acute provider care
   - Identify Home Health Issues
   - Support Patient Dietary understanding and adherence

5. Medication Reconciliation
   - “Make Meds Make Sense” via teaching, lists, videos, etc.
   - Involve Key Learners
   - Clarify Roles and Responsibilities
   - Use Teach-Back

Summary of Action Plans from Collaborative Participants

- Measurement, Reporting, Analysis of Readmissions
- Readmission feedback to/problem solving with physicians (individual, committees, credentialing)
- Monthly or weekly readmission reporting (to MEC, Board, other)
- Midas+ readmission screening tool and reports
- Case management monitoring of discharge appropriateness
- Focus on cause of joint readmissions (infection, falls, pain, etc.)
- Provide feedback to hospitalists on use of home health post discharge
- Readmission benchmarking (bimonthly, quarterly, annual)
- Maximize post-discharge 30-day
- Maximize readmissions less than 30 days post discharge
2. Actions and Structures to Reduce Readmissions

- Post-acute provider meetings and plans
- Heart Failure/Primary Care clinics
- Evidence-based Order Sets Aimed at Readmission Reduction
- Regular meetings with hospitalists
- Establish or revitalize medication teams
- Implement Fluid/Fluid/Fluid for Care Improvement practices
- Clinical pathways for key diagnoses
- Assess readmission risk, take additional steps (LACE, Nursing Admission Assessment, etc.)
- Identify primary care physician at admission
- Reconcile medications
- Begin discharge planning at admission
- Track patients without follow-up physicians and seek provider
- Palliative care program

Summary of Action Plans from Collaborative Participants

3. Actions During Stay to Prepare for Discharge

- Conduct multidisciplinary discharge meetings for problematic patients
- Identify readmission patient in ED
- Assess readmission risk, take additional steps (LACE, Nursing Admission Assessment, etc.)
- Identify primary care physician at admission
- Reconcile medications
- Track patients without follow-up physicians and seek provider
- Palliative care program

Summary of Action Plans from Collaborative Participants

4. Actions during the Discharge Process

- Bedside delivery of medications
- Post-discharge visits scheduled before discharge
- Patient and family education
- Transitional care checklist
- Enhanced hand-off to physician providing ongoing care (e.g., meaningful discharge summary)
- Scales/CardioMEMS to select heart failure patients
- Enhanced discharge packets

Summary of Action Plans from Collaborative Participants
5. Actions After Discharge to Enhance Follow-up Care

• Care Assure program
• Discharge phone calls
• Nurse home visits
• Care or other navigators
• Coordinate transition and home health visits
• Assure following physician gets discharge summary

Summary of Action Plans from Collaborative Participants
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Project Re-Engineered Discharge (RED)

- AHRQ sponsored program to have hospitals to re-engineer their process in order to focus on 12 mutually reinforcing actions to achieve ideal discharge and transition care

Components of the RED

1. A written care plan
2. Review discharge summaries
3. Plan for the discharge of each patient in each care facility
4. Meds and medications
5. Review the discharge plan
6. Medication list
7. Discharge summaries
8. Review discharge summaries
9. Medication reconciliation
10. Readmission rates


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Readmissions and Quality

- In the current business model, they are doing things right—taking good care of the patient while the patient is in the hospital. It’s fine to ask these hospitals to change their business model and to become accountable for what happens to their patients after they are discharged.

- Let’s not call them bad hospitals or suggest that they are providing poor quality care. There is no evidence that they are.

- Ashish Jha

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Reducing Readmissions

Stephanie Ashman, MD

A Payer’s Perspective
The PCR rate below has been calculated as an overall rate. *Lower rate results in higher performance.* 

Data based on measurement years 2013 & 2014

<table>
<thead>
<tr>
<th></th>
<th>Final Rate 2014</th>
<th>Final Rate 2015</th>
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</thead>
<tbody>
<tr>
<td>2 Star</td>
<td>11.00%</td>
<td>9.00%</td>
</tr>
<tr>
<td>3 Star</td>
<td>17.00%</td>
<td></td>
</tr>
<tr>
<td>4 Star</td>
<td>11.00%</td>
<td></td>
</tr>
<tr>
<td>5 Star</td>
<td>6.00%</td>
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The scope

- Mean Medicare readmissions for 2007-2011 were 19%
- Dropped to 18.5% in 2012
- Readmissions cost >26 billion/year
- Estimated that 75% are avoidable
- These do not include observation stays or ED visits
  - Almost 25% of inpatient discharges followed by ED visit within 30 days (Rising, 2012)
Interventions to reduce 30-day rehospitalization: a systematic review

Abstract

BACKGROUND: About 1 in 5 Medicare fee-for-service patients discharged from the hospital is rehospitalized within 30 days. Beginning in 2013, hospitals with high risk-standardized readmission rates will be subject to a Medicare reimbursement penalty.

PURPOSE: To describe interventions evaluated in studies aimed at reducing rehospitalization within 30 days of discharge.

DATA SOURCES: MEDLINE, EMBASE, Web of Science, and the Cochrane Library were searched for reports published between January 1975 and January 2011.

STUDY SELECTION: English-language randomized, controlled trials; cohort studies; or noncontrolled before-after studies of interventions to reduce rehospitalization that reported rehospitalization rates within 30 days.

DATA EXTRACTION: Two reviewers independently identified candidate articles from the results of the initial search on the basis of title and abstract. Two physician reviewer teams reviewed the full text of candidate articles to identify interventions and assess study quality.

DATA SYNTHESIS: 43 articles were identified, and a taxonomy was developed to categorize interventions into 3 domains that encompassed 12 distinct activities. Predischarge interventions included patient education, medication reconciliation, discharge planning, and scheduling of a follow-up appointment before discharge. Postdischarge interventions included follow-up telephone calls, patient-activated hotlines, timely communication with ambulatory providers, timely ambulatory provider follow-up, and postdischarge home visits. Bridging interventions included transition coaches, physician continuity across the inpatient and outpatient setting, and patient-centered discharge instruction.

LIMITATIONS: Inadequate description of individual studies' interventions precluded meta-analysis of effects. Many studies identified in the review were single-institution assessments of quality improvement activities rather than those with experimental designs. Several common interventions have not been studied outside of multicomponent "discharge bundles."

CONCLUSION: No single intervention implemented alone was regularly associated with reduced risk for 30-day rehospitalization.

PRIMARY FUNDING SOURCE: None.

Contributing to readmission

- Patients: unprepared for discharge
- Difficulty with ADLs
- Trouble adhering to d/c medications
- Trouble accessing d/c medications
- Lack of social support
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Office follow up
- No studies done yet to determine optimal timing, duration.
- Should be done by primary care, hospitalist f/u was not shown to be effective

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Barriers to follow up
- No available appointment
- Ongoing primary care shortage
- Difficulty keeping appointment
- Transportation issues
- Feeling too sick to go
- Lack of clarity regarding who is responsible for care during transition
- ED may represent easiest access

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Care transitions program
“Coleman”
University of Colorado
During a four week program, patients with complex care needs receive specific tools, are supported by a transitions coach and learn self-management skills to ensure their needs are met during the transition from hospital to home.
Hospital visit, home visit, 2-3 phone calls over 30 days
Transitional care model

- The Transitional Care Model (TCM) provides comprehensive in-hospital planning and home follow up for chronically ill, high-risk older adults hospitalized for common medical and surgical conditions. The heart of the model is the Transitional Care Nurse (TCN), who follows patients from the hospital into their homes and provides services designed to streamline plans of care, improve patients' hospital and emergency department use, and prevent health status decline.

While TCM is nurse led, it is a multidisciplinary model that includes physicians, nurses, social workers, discharge planners, pharmacists and other members of the health care team in the implementation of tested protocols with a unique focus on increasing patients' and caregivers' ability to manage their care.
Community based transitions program

- Created by affordable care act
- Launched 2012 and will run for 5 years
- Community based organizations (CBOs) will use transition services to manage Medicare transitions and improve quality
- $300 million funding available
- CBOs paid once per discharge in 180 day period.
- No Las Vegas sites

CPT codes TCM

- 99495
  - Face to face within 14 days of discharge
  - Moderate complexity
  - Communication with patient or caregiver within 2 business days of discharge (phone call, email, or face to face)

- 99496
  - Face to face within 7 days
  - High complexity
  - Communication within 2 business days
Classification of Heart Failure

ACCF/AHA Stages of HF NYHA Functional Classification

A
At high risk for HF but without structural heart disease or symptoms of HF.

B
Structural heart disease but without signs or symptoms of HF.

C
Structural heart disease with prior or current symptoms of HF.

D
Refractory HF requiring specialized interventions.

NYHA Functional Classification

I
No limitation of physical activity. Ordinary physical activity does not cause symptoms of HF.

II
Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in symptoms of HF.

III
Marked limitation of physical activity. Comfortable at rest, but less than ordinary activity causes symptoms of HF.

IV
Unable to carry on any physical activity without symptoms of HF, or symptoms of HF at rest.

Heart Failure – A Growing Global Concern

Prevalence and Incidence

- Overall 2.1% prevalence in 51 member countries
  - 825,000 people ≥ 45 years of age are newly diagnosed each year with HF.
  - 15M heart failure patients in the ESC 51-member countries
  - Overall 2-3% prevalence

Mortality

- For AHA/ACC stage C/D patients diagnosed with HF:
  - 30% will die in the first year.
  - 60% will die within 5 years.

HF prevalence in the US is projected to increase 46% from 2012 to 2030, resulting in > 8M people ≥ 18 years of age with HF.
Heart Failure is Associated with High Hospitalization and Readmission Rates

- In 2010, there were 1 million hospitalizations in the US with HF as the principal diagnosis.
- Hospitalization rate did not change significantly from 2000.
- Average length of hospital stay:
  - Approximately 5 days (US)
  - 11 days (Europe)
- HF is also associated with high readmission rates:
  - ~25% all-cause readmission within 30 days
  - ~50% within 6 months

References:
1. CDC NCHS National Hospital Discharge Survey, 2000-2010

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Economic Burden of HF Will Continue to Rise Through 2030

- The AHA estimates that the total medical costs for HF are projected to increase to $70B by 2030—a 2-fold increase from 2013.
- 50% of the costs are attributed to hospitalization.

Reference:

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Worsening Heart Failure Leading to HF-related Hospitalizations Contributes to Disease Progression

- With each subsequent HF-related admission, the patient leaves the hospital with a further decrease in cardiac function.

Reference:
Graph adapted from: Gheorghiade MD, et al. Am J. Cardiol. 2005
HF-related Hospitalizations Are a Strong Predictor of Mortality\textsuperscript{1,2}

- Data from the EFFECT study, \( n = 9138 \) patients
- Among 1 year survivors after index EFFECT HF discharge, the number of heart failure hospitalizations in the preceding year stratified the risk of death in crude analysis\textsuperscript{1}
- Data from Setoguchi et al., \( n = 14,374 \) patients
- \textbf{ KP cumulative mortality curve for all-cause mortality after each subsequent hospitalization for HF}\textsuperscript{2}


Each admission decreases a patient's chance of survival.

Current HF Management Is Inadequate for Identifying and Managing Congestion Leading to Decompensation

\textbf{90\% of HF hospitalizations present with symptoms of pulmonary congestion.}\textsuperscript{1,2}

- Post hoc analysis of 463 acute decompensated HF patients from DOSE-HF and CARRESS-HF trials showed:
  - 40\% of patients are discharged with moderate to severe congestion.\textsuperscript{3}
  - Of patients decongested at discharge, 41\% had severe or partial re-congestion by 60 days.\textsuperscript{3}

\textsuperscript{1} Adams KF, et al. Am Heart J. 2005
\textsuperscript{2} Krum H and Abraham WT. Lancet 2009
\textsuperscript{3} Lala A, et al. JCF 2013

Identifying congestion early will lead to early treatment, prevent hospitalizations and slow the progression of HF.

<table>
<thead>
<tr>
<th>Congestion state at discharge</th>
<th>Absent or mild congestion</th>
<th>Moderate to severe congestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of patients discharged with</td>
<td>59%</td>
<td>24%</td>
</tr>
<tr>
<td>% of patients relapsed to</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>% of patients decongested</td>
<td>60%</td>
<td></td>
</tr>
</tbody>
</table>

Respiratory Readmissions

Angelica Honsberg, MD
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"You have a good chance of recovery if you can make it through hospital (re)admissions."

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**Pneumonia and Readmissions:**
- Pneumonia diagnosis responsible for approximately 1 million hospital admissions per year.
- Thirty-day all-cause pneumonia readmission rates vary from 15-30% (1/5 patients).
- Nearly 140,000 thirty-day pneumonia readmission rate.
- Responsible for more than 10 billion dollars per year in hospital expenditures.
- Most readmissions are not pneumonia-related causes.
- Targeting admission diagnosis only will not be as effective as implementing measures that are broader in scope.

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**Preventable Pneumonia Readmissions:**
- Limited literature looking at preventable 30-day readmissions after hospitalization.
- Estimated preventable pneumonia readmission rate is ~14%.
- Multiple factors associated with pneumonia readmission.
- May not be modifiable to amenable to intervention.
- Even with appropriate treatment, 1 out of 6 pneumonias will not resolve completely.
Factors Associated with Pneumonia Readmission:
- Age
- HCAP (7.5 x more likely to be readmitted)
- Immunodeficiency
- Malnourishment
- Heart failure
- Chronic debilitating condition (COPD, CKD, cirrhosis)
- Hospital acquired condition (33% increase in risk of readmission)
- Antibiotic resistant pathogen

Preventing Pneumonia Readmissions:
- Cleveland Clinic study (October 2015 ACCP Conference Abstract): Cleveland Clinic Prediction Model for Real Time Estimation of 30 day All Cause Readmission Risk for Patients Admitted with Pneumonia
  - Focused on predicting patients at risk for 30 days readmission using variables that were available at the time of discharge and could readily obtained from the EMR
  - Potentially improve allocation of post discharge resources to high risk patient
  - Study:
    - 12,954 patients admitted to Cleveland Clinic Main Campus
    - 25% of patients readmitted within 30 days of discharge
  - Predictor variables with greatest weight:
    - Number of admissions within the previous 6 months
    - Lowest pulse within 24 hours of admission
    - Lowest hemoglobin within the last 24 hours

Preventing Pneumonia Readmissions:
Potentially Modifiable Factors
- Patient:
  - Access to discharge meds
  - Understanding of discharge plan
  - Follow up appointment
- Physician:
  - Adherence of treatment guidelines
  - Ensure clinical stability prior to discharge
  - Ensure stability of co-morbidities prior to discharge
- Healthcare System:
  - Facility antibiotic stewardship
  - Education
  - Creation of clinical pathways
  - Computer assistance programs
  - Increased focus on transition of care
  - Project RED
  - Project BOOST

Preventing Pneumonia Readmissions:
Potentially Modifiable Factors