30 Day Readmission Efforts Within the Heart Failure Population

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Why Heart Failure?

- CMS penalties
  - HF, AMI, pneumonia
  - 2012 penalty was 1% of total CMS reimbursement, will increase yearly
- In 2012
  - 71% hospitals were penalized (2217)
  - 307 will lose maximum 1% reimbursements
  - Estimate $850 million will be reallocated

Focused Interventions

- Inpatient
  - Core measures, clinical guidelines, multidisciplinary approach
- Transition
  - Adequate discharge planning
  - Addressing of social issues
  - Identification of potential barriers to care
- Outpatient
  - Hospital follow up appointments
- Continued care
  - Access to healthcare providers

Why Heart Failure?

- 1 in 4 HF patients are re-hospitalized within 30 days, costing upwards of 17 billion $ per year in hospital payments
- Total cost of HF is estimated to be 34.4 billion $ per year
- Complexity of patient needs, consistent follow up care
### Nurse Navigators

- Implementation of Nurse Navigators
  - 2 Nurse Navigators (Master’s prepared Clinical Nurse Leaders)
  - Collaboration and lateral integration of multidisciplinary team
  - Patient education and counseling
  - Relationship building
  - Contact throughout healthcare continuum
  - Process improvement

### Communication

- 48 hour post discharge phone communication
  - Focused telephone assessment and triage
- Post acute care provider relationships and phone communication
  - Nurse liaisons
  - Education
  - Contact information

### Heart Failure Transition Clinic

- Transition clinic utilization
  - Nurse Practitioner led
  - Hospital follow up within 10 days of discharge
  - Available for “quickie visits”
  - IV lasix protocol
  - Outpatient ultrafiltration
Preventing the Readmission

- Use of observation status and Clinical Decision Unit
  - Emergency Department education
  - Protocol and order set usage
- Efficient and focused care
  - Placement of patient on specific unit or service
- Quick discharge to skilled nursing facility or hospice
  - Palliative Care team
  - Case management and Social Work

Reducing CHF readmissions: the low-hanging fruit

What’s Next?

- Extensive improvement and growth of Heart Failure program
- Expansion of Nurse Navigator program across medical center and other diagnoses
- Established preferred post acute care providers
- Education
- Exposure

Medication management of CHF on a fixed-income budget
Strategies to Reduce Rehospitalization for COPD and Pneumonia Discharges

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Objectives

• Discuss the burden of rehospitalization for patients discharged with COPD exacerbation and pneumonia
• Discuss risk factors for and causes of preventable readmissions
• Discuss proven strategies in the post-hospitalization management of patients with COPD exacerbation and pneumonia to decrease rates of rehospitalization
• Discuss an innovative approach to improvement in rehospitalization of patients with COPD at OSU East: A COPD Transitional Care Clinic

Rehospitalizations among Patients in the Medicare Fee-for-Service Program

Stephen F. Jencks, M.D., M.P.H., Mark V. Williams, M.D., and Eric A. Coleman, M.D., M.P.H.

• Analysis of Medicare claims data from 2003-2004 to describe the patterns of rehospitalization and the relation of rehospitalization to demographic characteristics of the patients and to characteristics of the hospitals


### Geographic Pattern of Rehospitalization

![Geographic Pattern of Rehospitalization](image)

Data on Hospital Readmissions

- **% of Medicare Beneficiaries Readmitted Within...**
  - 30 days of initial discharge = 19.6%
  - 90 days = 34%
  - 12 months = 56.1%

- **Unplanned Readmissions Cost Medicare $17.4 Billion**
- **20-40% of Patients are Re-hospitalized at a Different Hospital**
- **Average Medicare Payment for a Potentially Preventable Readmission $7,200 ($1400 Less Than Original Stay)**

Medicare Avoidable Readmission Penalty

- Incentive to improve care transitions and reduce avoidable readmissions
- Poor performing Hospitals (bottom quartile) will have all Medicare payments penalized
- Reduced Medicare DRG payments by 1%, rising to 3%
- 8 targeted conditions 2012
- Expanded to 7 targeted conditions 2015
- Readmission window 30 days

Targeted Conditions

2012
- Pneumonia
- Heart Failure
- Acute Myocardial Infarction

2015
- Chronic Obstructive Pulmonary Disease
- Coronary Artery Bypass Grafting
- Urinary Tract Infection
- Percutaneous Transluminal Coronary Angioplasty

Physician Barriers to Transitioning Patients from the Inpatient to the Outpatient Setting

- Worrying my patient will be “lost” to follow-up
- My patient has no insurance
- My patient has no primary care physician
- My patient needs to see a subspecialist sooner than 3 months from now
- I’m already too over-booked to see this patient within the next 3 days
- I have no idea what happened while this patient was in the hospital
### Risk Factors for Readmission

- Use of high risk medications (antibiotics, anticoagulants, glucocorticoids, narcotics, antidepressants, antipsychotics, hypoglycemic agents, and narcotics)
- Polypharmacy (5 or more discharge medications)
- Specific clinical conditions (CHF, COPD, stroke, cancer, weight loss, depression)
- Prior hospitalization within the last 12 months
- Black race
- Low health literacy
- Social isolation
- Leaving against medical advice

### Common Causes of Readmission

- Premature discharge
- Inappropriate site of discharge
- Insufficient follow-up
- Medication errors/Adverse drug events
- Poor transfer of information
- Procedural complications
- Nosocomial infections
Common Causes of Readmission

- Pressure ulcers
- Patient falls
- Insufficiently addressed co-morbid conditions (especially psychiatric conditions)
- Failure to address end of life care
- Failure to involve home health

COPD Burden

- Fourth-ranked cause of death in the US = 120,000 per year
- 726,000 hospital admissions per year
- 1.5 million emergency department visits per year
- COPD is underdiagnosed - Only 15 to 20 percent of smokers are ever diagnosed with COPD although the majority develop airflow obstruction

Outcomes Following Acute Exacerbation of Severe Chronic Obstructive Lung Disease

Am J Respir Crit Care Med Vol 154 pp 959-967, 1996

Survival Following Exacerbation

Am J Respir Crit Care Med Vol 154 pp 959-967, 1996
Common Reasons for COPD Readmission

- Inability to obtain medications
- Improper inhaler technique
- Insufficient follow-up
- Underutilization of pulmonary rehabilitation
- Tobacco dependence
- Comorbid conditions

Supplemental Therapy With Proven Efficacy

1. Smoking Cessation
2. Oxygen
3. "Triple Inhaler Therapy"
4. Vaccination
5. Pulmonary Rehabilitation

What is Pulmonary Rehabilitation and Why Should I Send My Patient for it?

• Multidisciplinary approach including exercise, education, nutritional advice, relaxation, emotional support, breathing techniques, and the development of coping skills
• 3 days per week for 6-8 weeks
• Can enroll in a maintenance program afterward
**Effects of Pulmonary Rehab on Hospital Readmission**

![Graph showing effects of pulmonary rehab on hospital readmission](image)

*Respiratory Research 2005, 8:54*

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**Why Isn't My Pneumonia Getting Better?**

- **Unusual Pathogens**
- **Complications of Pneumonia**
- **Noninfectious Illness**
- **Aspiration**

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**Why Isn't My Pneumonia Getting Better?**

- Early Treatment Failure-no response within 72 hours (6.5% of cases)
- Late Treatment Failure-initial improvement but deterioration after 72 hrs (7% of cases)
- Antibiotic Noncompliance
- Inadequate Antimicrobial Selection- Think Staph, drug-resistant Pneumococcus, Pseudomonas (especially in patients with structural lung disease), and viruses

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**Unusual Pathogens**

- Tuberculosis
- Endemic fungal pneumonia (histoplasmosis, blastomycosis, coccidiomycosis)
- PCP
- Coxiella burnetti
- Tularemia

*Images provided courtesy of CDC*
### Unusual Pathogens
- Anaerobes
- Nontuberculous mycobacteria
- *Yersinia Pestis*
- Leptospirosis
- Psitaccosis
- *Bacillus anthracis*
- Hantavirus

*Images provided courtesy of CDC*

### Complications of Pneumonia
- Empyema and other metastatic infections
- Lung abscess
- Nosocomial pneumonia
- Pulmonary Embolus
- Bacterial superinfection of viral pneumonia

*Images provided courtesy of MedPix*

### Noninfectious Illneses
- Pulmonary embolus
- Congestive Heart Failure
- Obstructing bronchogenic carcinoma
- Vasculitis (Wegener’s)
- Sarcoidosis

*Images provided courtesy of MedPix*

### Noninfectious Illneses
- Hypersensitivity pneumonitis
- Cryptogenic Organizing Pneumonia
- Drug-induced lung disease
- Eosinophilic pneumonia
- Acute interstitial pneumonia
- BAC

*Images provided courtesy of MedPix*
Evaluation and Testing in the Non-Responding Patient

- Repeat Chest X-ray
- Chest CT
- Pleural fluid should be sampled via thoracentesis
- Bronchoscopy with bronchoalveolar lavage
- Open lung biopsy

Predischarge Interventions

- Patient Education
- Discharge planning
- Medication Reconciliation
- Scheduling follow-up appointments

Post-Hospital Management of Community-Acquired Pneumonia

- Follow-up chest x-ray 4-6 weeks following admission to exclude malignancy
- Smoking cessation counseling (smoking is a risk factor for CAP)
- Patients at risk for CAP should receive Influenza and Pneumococcal Vaccination
- HIV testing for patients age 15-54 admitted with CAP, or anyone with risk factors
- PPD testing for those patients with tuberculosis risk factors

Postdischarge Interventions

- Follow-up phone call
- Communication with ambulatory provider
- Home visits
- Teleconferencing visits
- Transitional care clinics
**Bridging Interventions**

- Transition coaches
- Patient-centered discharge instructions

**Hospitalizations and ED Visits**

- Randomized, adjudicator-blinded, controlled trial at five VA centers including 743 patients with severe COPD who had either been hospitalized or to the ED for COPD on systemic steroids, or on home oxygen.
- Intervention group received a single 1-1.5 hr education session, an action plan for self treatment of exacerbations, and monthly follow-up calls from a case manager.
- Followed for one year.

**Disease Management Program for Chronic Obstructive Pulmonary Disease**

**A Randomized Controlled Trial**

J. Benjamin Crocker, MD, Jonathan T. Crocker, MD and Jeffrey L. Greenwald, MD

American Journal of Medicine, The Volume 125, Issue 9, Pages 915-921 (September 2012)

DOI: 10.1016/j.amjmed.2012.01.035

- Systematic review of three large randomized trials examining the effects of a primary-care based follow-up phone call on rates of rehospitalization.
- None of the trials showed a reduction in rates of rehospitalization.
A Reengineered Hospital Discharge Program to Decrease Rehospitalization: A Randomized Trial

Intervention group received:
1. A nurse discharge advocate to assist with discharge planning and preparation
2. Medication reconciliation
3. Follow-up appointments scheduled at times convenient to the patient
4. Phone call from a clinical pharmacist two to four days after discharge
5. A low literacy discharge instruction booklet for patients


OSU East COPD Transitional Care Clinic

- For Patients With a Primary Discharge Diagnosis of COPD Exacerbation
- All Visits Led by Advanced Practice Nurse (APN)
- Patients Seen Within One Week of Discharge
- Two Appointments Per Patient
- Clinic Located Within Walking Distance of Hospital
- Completed a Retrospective Review of the Clinic’s First Year of Operation (08/01/2011-07/31/2012)

Clinic Interventions

- Medication Reconciliation
- Assessment of Response to Therapy and Medication Adjustments as Necessary
- Smoking Cessation Counseling
- Inhaler Technique Training
- Vaccination

Cumulative hazard rate of hospital utilization for 30 days after index hospital discharge

Clinic Interventions

- Follow-up of Micro and Radiology from Hospitalization
- Pulmonary Rehabilitation Referral
- Pulmonary Function Testing, Arterial Blood Gas Analysis, and Bone Density Testing When Indicated

Summary

- Nationally, readmissions for pneumonia and COPD are exceedingly high at a great financial cost to the healthcare system
- Preventing avoidable readmissions has the potential to profoundly improve both the quality-of-life for patients and the financial well-being of healthcare systems
- Critical elements to successful hospital discharge include accurate medication reconciliation, establishing timely follow-up, and communication of the discharge plan to the primary care physician

Summary

- Several systems initiatives have shown promise in reducing rates of readmission including enhanced patient education and empowerment, home visits, telephone calls, transitional care managers, and early post-discharge follow-up at transitional care clinics
- Multiple concurrent interventions may be more effective than single components