30 DAY COPD READMISSIONS AND PULMONARY REHAB

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OVERVIEW

- The Impact of COPD Readmissions
- Pulmonary Rehab Core Components

No Disclosures to report.
EVOLVING U.S. HEALTH CARE DELIVERY SYSTEM

Patient Protection and Affordable Care Act of 2010

Stated goals:

• Increase access
• Improve quality of health care outcomes
• Improve patient safety
• Eliminate duplication/waste
• Enhance care coordination
• Reduce rate of healthcare inflation to sustainable levels
WHAT IS THE COST OF UNPLANNED READMISSIONS?

• NEJM April 2009: Jencks, SF et al
• CMS Data from 2003-2004
• 1/5 of those who had been D/C’ed were readmitted within 30 days
• 50% of the those readmit. after d/c from a medical condition were lacking a bill for a MD visit between D/C and readmit.
• $17.4 billion in unplanned readmissions
### Table 2: Highest Rates of Rehospitalization and Most Frequent Reasons for Rehospitalization, According to Condition at Index Discharge.

<table>
<thead>
<tr>
<th>Condition at Index Discharge</th>
<th>30-Day Rehospitalization Rate</th>
<th>Proportion of All Rehospitalizations</th>
<th>Reason for Rehospitalization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>percent</td>
<td>Most Frequent</td>
<td>2nd Most Frequent</td>
</tr>
<tr>
<td><strong>Medical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>21.0</td>
<td>Heart failure (6.6)</td>
<td>Pneumonia (4.5)</td>
</tr>
<tr>
<td>Heart failure</td>
<td>26.9</td>
<td>Heart failure (7.0)</td>
<td>Pneumonia (5.1)</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>20.1</td>
<td>Pneumonia (29.1)</td>
<td>Heart failure (7.4)</td>
</tr>
<tr>
<td>COPD</td>
<td>22.6</td>
<td>Pneumonia (11.4)</td>
<td>Heart failure (5.7)</td>
</tr>
<tr>
<td>Psychoses</td>
<td>24.6</td>
<td>Psychoses (67.3)</td>
<td>Drug toxicity (1.9)</td>
</tr>
<tr>
<td>GI problems</td>
<td>19.2</td>
<td>GI problems (21.1)</td>
<td>Nutrition-related or metabolic issues (4.3)</td>
</tr>
<tr>
<td><strong>Surgical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>15.6</td>
<td>Heart failure (6.0)</td>
<td>Pneumonia (4.3)</td>
</tr>
<tr>
<td>Cardiac stent placement</td>
<td>14.5</td>
<td>Cardiac stent (19.7)</td>
<td>Circulatory disorders (8.5)</td>
</tr>
<tr>
<td>Major hip or knee surgery</td>
<td>9.9</td>
<td>Major hip or knee problems (9.0)</td>
<td>Postoperative infection (6.4)</td>
</tr>
<tr>
<td>Other vascular surgery</td>
<td>23.9</td>
<td>Major hip or knee problems (9.0)</td>
<td>Circulatory disorders (8.5)</td>
</tr>
<tr>
<td>Major bowel surgery</td>
<td>16.6</td>
<td>GI problems (15.9)</td>
<td>Postoperative infection (6.4)</td>
</tr>
<tr>
<td>Other hip or femur surgery</td>
<td>17.9</td>
<td>Pneumonia (9.7)</td>
<td>Heart failure (4.8)</td>
</tr>
</tbody>
</table>

* Index conditions listed within medical and surgical groups are in order of decreasing total number of rehospitalizations within 30 days after discharge. The diagnosis-related group (DRG) numbers for the conditions listed are as follows: acute myocardial infarction: 121, 122, 123, 516, 520; arrhythmia: 128, 129; amputation: 113; cardiac stent: 517, 527; chest pain: 143; circulatory disorders: 124; COPD: 088; depression: 429; drug toxicity: 449; drug or alcohol misuse: 521; fracture of hip or pelvis: 216; gastrointestinal bleeding: 192; gastrointestinal problems: 182, 183, 184; heart failure: 127; major bowel surgery: 148, 149; major hip or knee problems: 200; nutrition-related or metabolic issues: 296, 297, 298; operation for infection: 415; organic mental conditions: 429; other hip or femur surgery: 210; other circulatory diagnoses: 144; other vascular surgery: 478; pneumonia: 79, 80, 81, 89, 90, 91; postoperative infection: 418; psychoses: 410; pulmonary edema: 087; rehabilitation: 462; renal failure: 316; respiratory or ventilatory issues: 475; septicemia: 416, 417; and urinary tract infection: 320, 321, 322. COPD denotes chronic obstructive pulmonary disease, and GI gastrointestinal.
THE CONCLUSION ……

• Rehospitalization is a frequent, costly, and sometimes life-threatening event that is **associated with gaps in follow-up care**. We are beginning to understand that the rate of rehospitalization can be reduced with the implementation of more reliable systems, but it would be **premature to predict how much reduction can be achieved**. Although the rehospitalization rate is often presented as a measure of the performance of hospitals, it may also be a useful indicator of the performance of our health care system. From a system perspective, **a safe transition** from a hospital to the community or a nursing home **requires care that centers on the patient and transcends organizational boundaries**. Our purpose in this report has been to strengthen the empirical foundation for designing and providing such care.
PENALIZING HOSPITALS FOR COPD READMISSIONS

- COPD is responsible for 1.5 million ED visits
- 750,000 hospitalizations annually
- Healthcare costs nearly $60 billion
- Hospitalized patients w. AECOPD 34-40% do not receive recommended therapies
- Access to high quality out-patient services
- Notes only a minority of readmits are potentially modifiable... evidenced based interventions needed

COPD

• 3rd Leading Cause of Death
• 70% of the 24 million are under the age of 65
• COPD resulted in $49 billion in indirect costs in 2010
• Est. as much as 60% or more are undiagnosed (mild to moderate)
• Common Comorbidities – CVD, osteoporosis, depression, anxiety, skeletal muscle dysfunction, metabolic syndrome and lung cancer
Global Strategy for Diagnosis, Management and Prevention of COPD, 2013: Chapters

- Definition and Overview
- Diagnosis and Assessment
- Therapeutic Options
- Manage Stable COPD
- Manage Exacerbations
- Manage Comorbidities
- Asthma COPD Overlap Syndrome (ACOS)
Definition of COPD

COPD, a common preventable and treatable disease, is characterized by persistent airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases.

Exacerbations and comorbidities contribute to the overall severity in individual patients.
A clinical diagnosis of COPD should be considered in any patient who has dyspnea, chronic cough or sputum production, and a history of exposure to risk factors for the disease.

Spirometry is **required** to make the diagnosis; the presence of a post-bronchodilator $FEV_1/FVC < 0.70$ confirms the presence of persistent airflow limitation and thus of COPD.
Consequences Of COPD Exacerbations

- Negative impact on quality of life
- Impact on symptoms and lung function
- Increased economic costs
- Increased lung function decline
- Increased Mortality
DOES PR HELP TO REDUCE READMISSIONS?

• Cochrane Review Data – 9 studies involving 432 patients
• Assessed the effects of PR after COPD exacerbations on future hospital admissions, mortality and QOL
• PR significantly reduced hospital readmissions
• Health Related QOL measures - CRQ and the St. George’s Questionnaire were well above the min. important difference
• PR significantly improved exercise capacity – 6 MWD improvement was average 77 m well above the min. important difference

PR is a highly effective and safe intervention to reduce hospital admissions and mortality and to improve health-related QOL in COPD patients who have suffered from an exacerbation.

PR IS PART OF THE SOLUTION TO REDUCING READMISSIONS

• GOLD Guidelines recommends PR within the first month after d/c

• PR professionals possess the skills necessary to assess chronic lung disease patients and co-morbid conditions that so often complicate the care of this population of patients
Respiratory Insufficiency

Exacerbations

Hospitalization

Patient Complications
Healthcare Burden

Dyspnea

Weakness

De-conditioned

Exacerbations
PULMONARY REHABILITATION

As defined by the ATS and ACCP in 1974 as
An Art Including:

• Individually tailored Care
• Multidisciplinary Services
• Emotional support
• Education to stabilize/reverse physio-psychopathology of disease
• Restore to the highest possible functional capacity

Breathe. Move. Live
PULMONARY REHABILITATION IS STANDARD CARE FOR PATIENTS WITH CHRONIC LUNG DISEASE.

YET, MOST ARE NOT REFERRED.

IMPROVES: QOL, DEPRESSION, SELF-EFFICACY, EXERCISE ACTIVITY

REDUCES – DYSPNEA, MUSCLE FATIGUE, ANXIETY AND PANIC
PULMONARY REHABILITATION INTERVENTION

• Initial Evaluation
• Assess and then admit 2 x week x 8 weeks
• 2.5 hour sessions (education – skills building and exercise)
• Studies suggest 20 sessions of exercise most beneficial (can include Home Exercise Program)
• One-on-one sessions when needed
PR CORE COMPONENTS

• Evaluation – includes 6 MWT

• Intervention

  Education - early symptom recognition, exacerbation plan use
  Improve patient skills, knowledge and abilities for better self care

  Exercise – Remain and/or gain independence w. ADLs

  Nutrition – support for making behavior changes that
  improve ventilatory efficiency

  Psychosocial support for feelings of depression, fear, loss,
  isolation and progressive disability

  Oxygen Assessment – key to improving physical function

• Outcomes and Follow up
DIAGNOSIS APPROPRIATE FOR REFERRAL

- Emphysema, asthma, chronic bronchitis
- Bronchiectasis, CF
- Restrictive lung disease: Interstitial fibrosis, Sarcoidosis, Asbestosis
- Lung Cancer and PAH (?)
- Pre/Post lung surgical candidates such as LVRS, mass removal with resection and lung transplantation
- Avoid referring patients w. unstable angina, cognition impairment, acute pain, home bound
THE PROBLEMS WITH O2 THERAPY

• **Inadequate assessments**
• Poor portability – cumbersome, heavy
• Poor adherence
• Inadequate patient instruction - low patient understanding
• Short or no follow up to help patients adapt – how to use equipment or how to estimate duration of supply
• Mixed messages – between providers
• Decrease in delivery/system choices given economics for DMEs
CMS OXYGEN PRESCRIPTION REQUIREMENTS

- Resting – room air
- Exercise – Activity (room air)
- On O2 - rest and with exertion
- PaO2 55 mmHg or SPO2 of ≤88%
EDUCATION

• Purpose based – why change, benefits and consequences
• Orientation and Breathing Retraining – Teaching causes for shortness of breath
• Lung Medications and Your Body and Using Oxygen
• **Self Care- Exacerbation Prevention and Emergencies**
• Exercise Principles – build in accountability
• **Stress Reduction – 4 group sessions w. a psychologist**
• Energy-Saving, Nutrition, Adv. Directives (Vial of Life), Travel, Bronchial hygiene
• Curtail to meet individual patient needs – dx specific
EXERCISE TRAINING IN COPD

- Intensity - Higher the better BORG 3-4, ACSM BORG of 4-6
  - BORG – 3= moderate, 4 = somewhat severe and 5 = severe
- Type – Treadmill, NuStep
- Frequency – including HEP up to 3-5 x weekly
- Duration
  - session - at least 20-30 minutes
  - program - 8-12 weeks (36 supervised), then lifetime
- Medications - optimize BDs, may need pre exer
- Oxygen
EXERCISE COMPONENTS

- U/LE Strength Training
- U/LE Endurance Training
- Flexibility & Stretching
- Oxygen Treatment
- Implementation of the HEP

- Modes
- Intensity
- Duration
- Frequency
- Plan for progression
PR SWOT

- **Strengths** - skills, knowledge and abilities to assess and treat COPD patients
  - knowledge of payers, established relationships w. community physicians and DMEs

- **Weaknesses** – labor intensive, processes are less then optimally efficient,
  - Some may be used to working independently of other departments – more partnerships are needed

- **Opportunities** - To be viewed as an asset to reducing readmissions, to increase referrals, to get more staff. To sustain a viable department in cost cutting times.

- **Threats** – Missing the opportunity, someone else will do it !!
MORE CHALLENGES

- Changing landscape of payers - time consuming to obtain authorizations
- Straddling the fence between FFS (Medicare) and cost saving benefits
- May have a high drop out rate due to illness, constant appointment rescheduling due to illness or spouses illness, etc.
- Increased expectations for increased productivity
- Increased burden to screen more referrals, often service is not covered or patient is not appropriate for PR
WHAT ARE SOME OF THE CHALLENGES?

• Pulmonary rehab services are under utilized
• Medical professionals including acute care RTs are unfamiliar w. services
• Many PR programs are understaffed and lack support of a physician or involvement of a Medical Director
• Resistance by some of the stake holders
• Poor efficiency – no standard electronic orders, scheduling appointments
HOW DO WE DO IT?

• Become the leading ambassador for reducing readmissions in COPD by getting on hosp. transition committees
• Be the experts on chronic care of the COPD patient
• Contribute to education material development for the hospitalized patient
• Work w. RC Department and train in PR indications for referral
• Network w. Nursing and Transition of Care Teams
• Get PR consult/referral in the order set – provide in. pt. consults
JUST DOING IT !!

• Rebrand and expand your services to include preventative pulmonary and rehabilitative services

• Become an asset to the transition care initiative within your hospital

• Develop and provide presentations to nurses, physicians, resp. care providers

• Leverage for more resources – labor, front office support, from your medical director

• Engage members of the community – area aging and independence groups, DMEs, ALA
OUR EXPERIENCE THUS FAR

- Established a COPD Care Team
- Joined the Hospital COPD Transitions Physicians Team
- Contributed knowledge and expertise
- Identified and engaged partners
- Provided educational presentations to hospital MD staff, RC department and transition nurses and coaches
- Jointly developed education materials
- Contributed to the business plan requesting 1.5 FTES (COPD coordinator and a .5 PR RT flex ability)
COLLABORATING WITH ACUTE RESP. CARE

• Collaborated on in-patient RC admitting evaluation content
• Established objective criteria for PR referral
• Provided expertise – including identifying validated tools
  • mMRC – assessing dyspnea and function (2 or more at baseline)
  • CAT – COPD Assessment Test (20-30)
• Ambulatory enough to attend out-patient PR
• Educate – co-developed education steering committee for acute care RTs
GOALS AND OBJECTIVES

#1 Adopt best clinical practices guided by national guidelines
#2 Create a transition pathway for COPD patients that optimizes post d/c home care, follow-up, education and PR
#3 Establish a center of excellence for COPD

- Reduce 30 day readmissions from 21% to 10%
- Min. of 75% to receive education and action plan before d/c
THE FUTURE

• Pulmonary Rehab alone will not reduce readmissions in all patients
• It’s about getting the right resources to the right patient every time
• Expect to prove your contribution and justify your FTEs and budget
• Delivery models will need to be more flexible to treat more patients and more patients with diverse needs. Physician office visits for longer term follow-up
• The focus will be on outcomes
• Expect to work with diverse payer plans in 2014 – Medicare C plans (HMO) high co-pays causing some patients to ration care to limit out of pocket expenses.
• FFS business will grow, collecting data that demonstrates how PR services is helping to contribute to reducing readmission is critical.
• Expect less FFS and more bundled services that improve outcomes in the future.
• Expansion, partnership and efficiency are required to thrive in the changing landscape of health care.
IN SUMMARY

• COPD will be a core measure and hospitals will be financially penalized for 30 day readmissions in 2015.

• **Pulmonary Rehabilitation Works!** And it is a standard of care.

• **Outcomes include:**
  
  - Improved dyspnea and physical function
  - Increased self-efficacy (confidence)
  - Reduced HC costs - reduced admissions
  
  High patient satisfaction

• Patients w. >2 exacerbations/yr and FEV1 < 50% have higher risks for readmission

• **Recommended Reading – Gold Guidelines for COPD 2014**
EXPANSION, PARTNERSHIP AND EFFICIENCY ARE REQUIRED TO THRIVE IN THE CHANGING LANDSCAPE OF HEALTH CARE.
THANK YOU!!