Strategies for Preventing COPD Exacerbations and Readmissions

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Objectives

Upon completion of the program, the learner will be able to:

- Identify the reasons patients experience hospital readmissions due to COPD.
- Identify methods to reduce hospital readmissions due to COPD.

Statistics

- 3rd leading cause of death in the United States
- 2010, COPD accounted for nearly $50 billion of cost in the United States
- Rate of hospitalizations due to COPD is increasing
- Hospitalizations for COPD exacerbations account for more than 50% of the cost of managing COPD
Exacerbations

- According to Chest, exacerbations that cause hospitalizations, contribute to death during hospitalization or shortly thereafter, expedite decline in pulmonary function, decrease quality of life, and consume financial resources.
- 2/3 are associated with respiratory tract infections or air pollution

Why all the fuss about COPD, exacerbations, and hospital readmissions?

- Care quality and outcomes are less than optimal
- Gaps in service
- Underuse of diagnostic pulmonary function testing and overuse during an acute exacerbation
- Wide variation in treatment
- Underutilization of maintenance therapy
- Lack of patient education
- Lack of outpatient follow-up and chronic disease management
- Lack of patient resources/advocates
- Overall, hospital readmissions are largely preventable

If that doesn’t motivate us to do more for this patient population, maybe this will......

- 2012 Affordable Care Act – requires CMS to reduce payments for hospitals with excessive readmissions (Hospital Readmissions Reductions Program)
- First dx were AMI, CHF, and PNA
- Readmissions within 30 days of D/C to any hospital for all cause readmission (ANYTHING)
- 2015 CMS included COPD exacerbations
- Penalty up to 3% of all Medicare payments ($163,000 per hospital)
- $428 million in penalties across the nation
Where do we start?

PREVENTION

Types of Prevention
American College of Chest Physicians and Canadian Thoracic Society:
Guidelines for Preventing AE COPD
- Non-pharmacologic
- Inhaled therapies
- Oral therapies

Non-Pharmacologic
- Vaccinations
- NIV (White et al., 2015)
- Appropriate treatment of psychological disorders (Singh et al., 2016)
- Smoking Cessation
- Pulmonary Rehab
- Patient Education
- Case Management
- Telemonitoring
- Transitional Care (Kangovi et al., 2014)
Smoking Cessation

- Only evidence-based intervention that improves COPD prognosis
- Effective strategies include behavioral, physiologic, and psychologic components
  - Acknowledgment of current smoking
  - Advise to quit
  - Pharmacologic therapies (NRT, antidepressants, nicotine receptor modifier therapy)
  - Counseling (in person or telephone)

The sooner, the better

Pulmonary Rehab

**Recommended:**
- Patients w/ moderate, severe, or very severe COPD who have had a recent hospitalization (less than 4 weeks)

**Not Suggested:**
- Pulmonary rehab for prevention of readmission in patients who have been discharged for greater than 4 weeks

Improves quality of life, exercise tolerance, and dyspnea

Education, Case Management, & Telemonitoring

**Recommended:**
- Education and Case Management with follow-up at least monthly

**Suggested:**
- Education with action plan and case management

**Not Suggested:**
- Education alone
- Case management alone
- Education with action plan but without case management
- Telemonitoring (compared to usual care does not prevent AE COPD)
**Inhaled Medication Therapy**

- **Terminology**
  - **Moderate Exacerbation** = oral steroids, abx, or both
  - **Severe Exacerbation** = requires hospitalization
  - SABA = Short-acting β<sub>2</sub> agonist
  - LABA = Long-acting β<sub>2</sub> agonist
  - SAMA = Short-acting muscarinic antagonist
  - LAMA = Long-acting muscarinic antagonist
  - ICS = Inhaled Corticosteroid

**Recommended:**
- LABA vs. Placebo
- LAMA vs. Placebo, LABA, or SAMA
- ICS/LABA combo vs. placebo, LABA alone, or ICS alone
- LABA/LAMA combo, or ICS/LABA combo, or LAMA alone

**Suggested:**
- SAMA/SABA vs. SABA alone
- SAMA/LABA vs. LABA alone
- SAMA vs. SABA
- LABA vs. SAMA
- LAMA/LABA vs. placebo

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**Oral Medication Therapy**

- **Suggested:**
  - Long-term macrolides (1 or more moderate/severe exacerbations in the year despite optimal maintenance inhaler tx; prolong QT)
  - Systemic corticosteroids in first 30 days after subsequent exacerbation
  - Phosphodiesterase 4 inhibitors for chronic bronchitis with at least one exacerbation in previous year – (i.e. daliresp); weight loss and diarrhea
  - Theophylline – slow release BID; requires monitoring; need to know if patient stops smoking while taking theophylline
  - NAC – 2 or more exacerbations in previous year; antioxidant, anti-inflammatory, and mucolytic
Oral Medication Therapy

**Not Recommended:**
- Long-term systemic corticosteroid use (beyond 30 days) to prevent AE COPD
- Statins

We need to work together to break this cycle.

QUESTIONS?

References


