Improvement in Dyspnea – Implementing Pulmonary Rehabilitation in the Home

Mary Cesarz MS, PT
Lisa Gorski MS, APRN, BC, FAAN
Wheaton Franciscan Home Health & Hospice
Milwaukee, WI

Objectives

- To identify the components of a pulmonary rehabilitation program
- To describe benefits and expected clinical outcomes
- To discuss appropriate interventions & case coordination of the nurse, physical therapist and occupational therapist in a home care program

Pulmonary Rehabilitation – An evidence based intervention

- Definition: “...is an evidence based, multidisciplinary, and comprehensive intervention for patients with chronic respiratory diseases who are symptomatic and often have decreased daily life activities. Integrated into the individualized treatment of the patient, pulmonary rehabilitation is designed to reduce symptoms, optimize functional status, increase participation, and reduce health care costs through stabilizing or reversing manifestations of the disease.”
  
Pulmonary Rehabilitation – An evidence based intervention

- From the Nursing Best Practice Guideline “Nursing Care of Dyspnea: The 6th Vital Sign in Individuals with COPD”
  - Nurses should promote pulmonary rehabilitation
  - Pulmonary rehabilitation programs must be available for individuals with COPD to enhance quality of life and reduce healthcare costs
    - Level 1a evidence (strong research support)

What comprises pulmonary rehabilitation?

- Exercise training
- Education – a combination of teaching, counseling, and behavior modification techniques to promote self care management skills

Why?

- “Patients at all stages of disease benefit from exercise training programs, with improvements in exercise tolerance and symptoms of dyspnea and fatigue. Benefits can sustained even after a single pulmonary rehabilitation program. The minimum length of an effective rehabilitation program is 6 weeks; the longer the program continues, the more effective the results.”
  - http://www.goldcopd.org/Guidelineitem.asp?i1=2 &i2=1&intId=1116
Research Support (selected references)

- Influence of referring MD is important (Arnold et al., 2006)
- Individually tailored and supervised walking & arm exercise program for homebound elderly COPD patients effective in improving exercise tolerance; should expand home based PR programs (Boxall et al., 2005)
- Significant reduction in hospital admissions, ED use, and unscheduled MD visits for patients who completed program (Bourbeau et al., 2003)

- Improved quality of life and exercise tolerance after home based PR program including stationery bike, upper extremity exercise and stretching, along with education (Ferrari et al., 2004)
- Improvement in exercise capacity, endurance, and 6 minute walk test after aerobic exercise training consisting of mainly walking at home (Na et al., 2005)

A Home Care Pathway for Pulmonary Rehabilitation

- Expected outcomes of pathway
  - Improved exercise tolerance as measured by increased distance walked during a 6 minute time period from baseline to discharge.
  - Improved knowledge of disease and management strategies
  - Improved score on the Pulmonary Quality of Life Tool (agency program outcome measurement)
  - Improvement in dyspnea as measured by OASIS item MO490
Criteria for Pathway

- Respiratory diagnosis with dyspnea on exertion that limits the ability to perform ADLs
- Patient willingness to participate
- Criteria EXCLUDING participation
  - Unstable respiratory disease
  - Presence of other disabling diseases that restrict the rehabilitation process
  - Patient not willing to participate in the program

Role of the Registered Nurse

- Assessment includes:
  - Current knowledge of disease
  - Past patterns of health care use
  - Patient perception of exacerbations and contributing factors
  - Nutritional status
  - Cardiorespiratory status
  - Medications and knowledge/adherence including use of oxygen and inhaled medications
- Individualized teaching based upon assessment and goal setting with patient

Teaching Topics

- The educational component of pulmonary rehabilitation should emphasize self management skills (ATS Practice Guideline, 2006)
  - Breathing strategies
  - Pathophysiology
  - Proper use of medications
  - Benefits of exercise
  - Energy conservation
  - Eating right
  - Avoidance of respiratory irritants
  - Prevention/treatment of exacerbations (Action Plan)
  - When to call the home care agency, MD
  - Coping with chronic illness
Excerpts from our general program information for patients …

"In this program, you can expect to:
- Improve your ability to exercise
- Decrease shortness of breath with activity
- Improve your understanding of COPD and how to manage it better"

"By completing the Pulmonary Rehabilitation Pathway, you can expect to:
- Better understand your disease
- Feel better
- Do more of what you want to do"

Suggested Patient Education Resources

- Ready, Aim, Improve Tools (www.medqic.org)
  - Pulmonary Rehabilitation – Patient Self Care Workbook
  - Patient Action Plan for COPD Signs and Symptoms
    http://medqic.org/docs/ContentServer?cid=1138751613457&pageName=Medqic%2FMQTools%2FTools&c=MQTools
- Living Well with Chronic Lung Disease: A Guide for Pulmonary Rehabilitation (Krames)
- COPD: Exercise and Daily Activity (Krames)

Role of the Physical Therapist

- Assessment
  - 6 minute walk test – first and last visit
  - Patient understanding of the role of exercise in decreasing shortness of breath, strengthening LE and increasing endurance
  - Use of primary vs accessory muscles in breathing
  - Level of dyspnea
  - Development and implementation of home exercise program focusing on LE
Role of the Occupational Therapist

- Assessment
  - Patient understanding & use of energy conservation and work simplification techniques
  - Level of ADL/IADL independence
  - Level of dyspnea
  - Teaching of energy conservation techniques
  - Development and implementation of home exercise program focusing on UE

Summary

- An interdisciplinary pulmonary rehabilitation pathway can be implemented in a home care agency with good patient outcomes
- Implementation of such a pathway/program requires significant staff education
- Enthusiastic therapists and nurses are essential in helping patients to recognize the benefits of a program
- Exercise programs developed in the home setting are often sustained for a longer period of time than those developed in other settings

Thank You!

References

References