Assessing a Patient for Pulmonary Rehabilitation

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Definition of Pulmonary Rehab

“Pulmonary rehabilitation is a multidisciplinary program of care for patients with chronic respiratory impairment that is individually tailored and designed to optimize physical and social performance and autonomy.”

1999 ATS Definition, adopted by the AACVPR Guidelines committee
What makes up a pulmonary rehabilitation program

Promotion of long-term adherence

Education and training

Psychosocial intervention

Prevention & Outcomes

Exercise

Assessment
Who sets our rule for pulmonary rehabilitation

- Currently, pulmonary rehabilitation services are ruled by Local Coverage Determination (LCD) policies. These vary from state to state.
- As of 1/1/2010, pulmonary rehab services will be a National Coverage Determination (NCD) policy and everyone will have to follow this policy.
Who is the team?

- Physicians
- Respiratory Therapists
- Nurses
- Physical Therapist
- Occupational Therapist
- Psychologists
- Speech Therapist
- Students
- Exercise Specialist
- Dietitians
- Social Workers
- Psychiatrists
- Home care personnel
- Chaplain
- Any others who lend the appropriate expertise
Patient Definition

“A life-saving pathway between inactivity and activity, isolation and socialization, depression and hope, and from being an observer of life to an active participant in it.”

Patient Definition, 1996
Patient goals for Rehab

- Breathe easier
- Be more active
- Have a better quality of life
- Increase strength and endurance
- Be able to perform activities of daily living
- Be able to travel with greater ease
- Be able to go to movies, etc.
Patient goals for Rehab

- Experience decreased anxiety, depression and fear of activities that cause shortness of breath
- Experience fewer exacerbations & hospitalizations
- Be more independent and self reliant
- Return to work
- Be able to clean house
Patient Selection

- We must look at the following:
  - Disease conditions
  - Pulmonary Function Tests
  - Symptoms
  - Quality of Life
  - Functional Status
  - Patient’s desire to do pulmonary rehabilitation
Assessment

- Initial component of a pulmonary rehab program is the interdisciplinary team assessment.

- This assessment sets the foundation for the patient’s plan of care.
  - Under the direction of the program manager and medical director.
  - This assessment is ongoing during the patient’s time in pulmonary rehabilitation.

- Many assessment tools are used.
  - Each discipline has its own assessment.
  - Patient’s are often asked to complete paperwork and bring it in with them.
When looking for a pulmonary rehabilitation patient......

- What lung disease do they have?
- Has anyone ever discussed pulmonary rehab with them before?
- Need a MD order!
- Remember pulmonary rehabilitation is now considered a standard of care for pulmonary patients!!
The Diseases
Appropriate for
Pulmonary
Rehab
Diseases

- Obstructive Diseases
  - COPD
  - Persistent asthma
  - Bronchiectasis
  - Cystic Fibrosis
  - Bronchiolitis Obliterans
Diseases

- **Restrictive Diseases**
  - **Interstitial Diseases**
    - Interstitial Fibrosis
    - Occupational/Environmental Lung Disease
    - Sarcoidosis
  - **Chest Wall Diseases**
    - Kyphoscoliosis
  - **Neuromuscular Disease**
    - Parkinson’s, ALS, Post Polio Syndrome, Diaphragmatic Dysfunction, MS
Diseases

- Other Conditions
  - Lung Cancer
  - Primary Pulmonary Hypertension
  - Pre and Post Thoracic and Abdominal Surgery
  - Pre and Post Lung Transplant
  - Pre and Post LVRS
  - Ventilator Dependency
  - Pediatric Patients
  - Obesity Related respiratory Disease
Pulmonary Function Studies

- Need to follow PFT guidelines as written by you LCD.
- Look at:
  - FEV₁
  - FVC
  - DLCO
- Currently in Indiana one of these numbers must be at or below 60%
Other conditions that lead to pulmonary rehab referral

- Dyspnea and fatigue with chronic respiratory symptoms
- Impaired quality of life
- Decreased functional status
- Decreased occupational performance
- Difficulty performing ADL’s
Other conditions that lead to pulmonary rehab referral

- Difficulty with medical regime
- Psychosocial problems due to underlying disease
- Nutritional depletion
- Increased use of medical resources
- Hypoxemia
Concurrent Disease

- These may be contraindications to PR
  - Ischemic Heart Disease
  - CHF
  - Acute cor pulmonale
  - Severe pulmonary hypertension
  - Significant Hepatic Dysfunction
  - Metastatic Cancer
  - Disabling Stroke
  - Active Substance Abuse
  - Severe Cognitive Deficit
  - Severe psychiatric disease
When you cannot admit a patient

- Unstable angina
- Resting BP, systolic over 200mmHg and diastolic over 100 mmHg
- Moderate to severe aortic stenosis
- Acute systemic illness or fever
- Uncontrolled atrial or ventricular arrhythmias
- Uncontrolled tachycardia
When you cannot admit a patient

- Symptomatic congestive heart failure
- Third Degree heart block
- Active pericarditis or myocarditis
- Recent embolism
- Thrombophlebitis
- Uncontrolled diabetes
- Orthopedic problems that would prohibit exercise
Other things to consider

- Tobacco Use
  - Must commit to quit!
- Patient Motivation
  - This can change during rehab, patient’s may get more motivated
- Financial ability
  - Insurance
- Transportation to and from program
Patient Assessment

- The patient assessment sets the foundation for the services provided by the interdisciplinary team.
- Initial assessment includes a patient interview.
- May be performed by various members of your team.
- Goals for the patient are developed from this interview and assessment.
What is in the assessment?

- Patient Interview
- Medical history and physical exam
- Diagnostic Test
- Symptoms assessment
- Musculoskeletal and exercise assessment
- ADL assessment
- Nutritional assessment
- Educational Assessment
- Psychosocial assessment
- Goal development
Medical History

- Respiratory history
- Active medical problems or comorbid conditions
- Medical and surgical histories
- Family history of respiratory disease
- Use of medical resources
- All Medications including herbal and OTC
- Allergies and drug intolerance

- Smoking History
- Occupational, environmental and recreational exposures
- Alcohol and other substance abuse
Physical Assessment

- **Vital signs**
  - Height, weight, blood pressure, heart rate, respiratory weight, temp

- **Use of accessory muscles of respiration**

- **Chest Exam**
  - Inspection, palpatation, percussion, symmetry, diaphragm position, breath sounds
Physical Assessment

- Signs of Heart Disease
  - Gallops, bibasilar lung crackles, peripheral edema, jugular venous distention, heart murmurs
- Presence of finger clubbing
- SpO2 with rest and activity
- Upper & lower extremity evaluation
  - Signs of vascular insufficiency, joint disease, musculoskeletal dysfunction
Diagnostic Tests

- Spirometry
- SpO2, at walk and resting
- CXR
- EKG
- Six Minute Walk
- Screening for depression and or anxiety
- CBC
Other Diagnostic Tests that might be considered

- Complete pulmonary function panel, including spiros, lung volumes and diffusion
- MIP’s and MEP’s
- CPST
- Symptom limited exercise study
- Bone Density measurement
- GE reflux testing
- Dysphagia evaluation
Other Diagnostic Tests
that might be considered

- Bronchial challenge
- Post-exercise spirometry
- Cardiovascular monitoring: holter, echo, thallium stress test
- Sleep Study
- Sinus radiographs
- CBC and Blood chemistry
- Theophylline levels
- Alpha₁ screening
- Skin Tests
Symptom Assessment

- **Dyspnea:**
  - Use BORG scale, paper and pencil tool
  - Exertional
  - Resting
  - Nocturnal
  - Paroxysmal

- **Fatigue**

- **Cough**

- **Sputum**
  - Color, volume, consistency, smell

- **Wheeze**

- **Hemoptysis**

- **Chest Pain**

- **Sinus Drainage**

- **Reflux, heartburn**

- **Edema**

- **Dysphagia, swallowing problems**

- **Extremity pain or weakness**
Exercise Assessment

- Physical Limitations
  - Strength, range of motion, posture, functional abilities and activities
- Orthopedic limitations
- Transferring abilities
- Exercise tolerance
  - Six Minute walk
- Exercise hypoexemia
- Gait and Balance
- Exercise modification
Pain Assessment

- Pain needs to be assessed at initial assessment
- Pain should also be assessed during all exercise sessions
- Use a 1-10 pain scale
Activities of Daily Living Assessment

- Functional Task Performance
- Breathing techniques with ADL’s
- Extremity Function
- Energy Conservation
- Need for adaptive equipment
- Food procurement and preparation
- Leisure impairment
- Sexual function
- Vocational evaluation
Nutritional Assessment

- Height and weight
  - BMI
- Weight changes
- Dietary History
- Person who shops for and prepares the food
- Fluid intake
- Alcohol consumption
- Laboratory tests
  - Serum albumin
  - Prealbumin
- Durg-nutrient reactions

- Lean body mass determination
- Need for nutritional supplements
- Current use of herbal or nutrient supplements
- Dentition and mastication
Educational Assessment

- Knowledge of disease and treatment
- Hearing
- Vision
- Cognitive Ability
- Language
- Literacy
- Cultural Diversity
Psychosocial Assessment

- Perception of Quality of life and ability to adjust to disease
- Interpersonal conflict
- Anxiety and depression
- Substance Abuse
- Addictive Disorders
- Neuropsychological impairment
- Sexual dysfunction
- Motivation for pulmonary rehabilitation
Why so much assessing?!??!

- It is done as an interdisciplinary team, so lots of eyes are on the patient.
- Allows for team to make patient goals along with the patient.
- It allows for realistic patient goals to be developed.
- We avert any potential clinical complications during rehabilitation and exercise!
Take Home Message

- Understand what is assessed in a pulmonary rehab program
- Don’t ever hesitate to refer patients to your pulmonary rehab program
- If in doubt of patient’s desire, let the rehab staff talk to you patients
- Respiratory Therapists are often are best referrals for patients to pulmonary rehabilitation, so talk it up!!
WELCOME TO PULMONARY REHAB!

[Image of a bulletin board with various posters and notices]