UMHS Indications for Spirometry in Primary Care Clinics

The goal of this document is to provide guidance as to the *indications* for spirometry that are appropriate for the primary care setting versus a formal pulmonary function testing (PFT) lab, not to advise physicians on which patients should undergo testing. For further discussion on which patients should be considered for testing, please see UMHS Asthma guideline [http://www.med.umich.edu/i/oca/practice guides/asthma.html](http://www.med.umich.edu/i/oca/practice guides/asthma.html) and UMHS COPD guidelines [http://www.med.umich.edu/i/oca/practiceguides/copd.html](http://www.med.umich.edu/i/oca/practiceguides/copd.html).

**Indications for Performing Basic Spirometry in Primary Care Settings**

- Unexplained, frequent, and/or persistent dyspnea (shortness of breath)
- Unexplained, frequent, and/or persistent cough
- Chronic wheezing
- Any patient with suspected chronic obstructive pulmonary disease (COPD) who has never had spirometry
- Any patient with suspected asthma who has never had spirometry
- Assessment of asthma control at least every 1 to 2 years and to evaluate for changes in asthma therapy
- Basic preoperative evaluation of lung function if indicated

**Special Situations for COPD/Asthma:**

- Spirometry is helpful to assess lung response to medication therapy.
  - Asthma patients should demonstrate a response to appropriate medication therapy within 2-6 weeks.
  - Consider a PFT laboratory referral for an absent or inconclusive response to medication therapy.
- Normal screening spirometry is helpful for ruling out and diagnosing significant lung disease.
  - If screening spirometry is abnormal, consider a PFT laboratory referral for further evaluation.
    - Patients with suggested restrictive ventilatory defect should undergo full PFT’s with total lung capacity for confirmation.
    - Patients with suggested obstruction who have no prior diagnosis of asthma or COPD should be referred for post-bronchodilator spirometry for diagnosis confirmation.
  - Consider referral for full spirometry with diffusion testing in a patient with clinically significant dyspnea and normal spirometry.
  - Consider referral for a methacholine challenge if spirometry was normal and asthma is still suspected.
  - Patients with combined emphysema and pulmonary fibrosis can have “normal” spirometry due to the effects of the combined diseases. If combined disorder is suspected, full pulmonary function testing with diffusion capacity can aid in diagnosis.

**Contraindications to Performing Spirometry in Primary Care**

- Presence of tracheostomy or other artificial airway
- Patients unable to follow commands (cognitive, language barrier, etc.) or less than age 5
- Patients with:
  - Known or suspected interstitial lung disease
  - Known, suspected, or active tuberculosis
  - Hemoptysis
  - Aneurysms (thoracic, abdominal, or cerebral)
  - Acute/active respiratory distress
  - Unstable vital signs
  - Acute nausea or vomiting
  - Unresolved pneumothorax
  - Unstable angina or myocardial infarction in the last month
  - Recent pulmonary embolism in the last month
  - Recent eye, ear, oral, brain, or cardiothoracic surgeries in the last 3 months