HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Respiratory Care Services		
Document:	Departmental Policy and Procedure		
Title:	Pulmonary Function Testing (PFT)		
Applies To:	Respiratory Therapy Staff		
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1. PURPOSE:

1.1 To asses ventilator function
1.2 To identify the severity of impairment

2. DEFINITONS:

2.1 Pulmonary Function Testing (PFT) —is a complete evaluation of the respiratory system including patient history, physical examinations, chest X— ray examination, arterial blood gas analysis, and test of pulmonary function

3. POLICY:

3.1 Pulmonary function testing has diagnostic and therapeutic roles and helps clinicians answer some general question about patients with lung disease
- 3.1.1 PFT will be done to patients who meets the established indications
- 3.1.2 To determine lung dysfunction suggested by the physician, medical history or physical indicators such as age, smoking history, family history of lung disease, chronic cough, other abnormal diagnostic tests.
- 3.1.3 To quantify the severity of a known lung disease.
  - 3.1.3.1 Assess changes in lung disease over time or following the administration or change of therapy.
  - 3.1.3.2 Assess the risk for surgical procedures known to affect lung function.

3.2 Absolute Contraindications:
- 3.2.1 AMI (3 —5 Days)
- 3.2.2 Unstable Angina
- 3.2.3 Uncontrolled Arrhythmia Causing Symptoms or HD Compromised
- 3.2.4 Syncope
- 3.2.5 Aclive Endocarditis
- 3.2.6 Symptomatic Severe Aortic Stenosis
- 3.2.7 Acute Myocarditis and Pericarditis

3.3 Relaive Contraindications:
- 3.3.1 Hemoptysis
- 3.3.2 Untreated Pneumothorax
- 3.3.3 Unstable Cardiovascular Status
- 3.3.4 Thoracic, Abdominal, or Cerebral Aneurysm
- 3.3.5 Recent Eye Surgery
- 3.3.6 Presence of an acute disease process may interfere with test performance (e.g. nausea and vomiting).

3.4 Adverse Reactions:
- 3.4.1 Bronchospasm
- 3.4.2 Increased intracranial Pressure Syncope, Dizziness, Light-Headedness and Chest Pain

3.4.3 Bronchospasm
3.4.4 Paroxysmal Coughing
3.4.5 Contraction of Nosocomial Infection

3.5 Candidates should avoid the following before procedure:
3.5.1 Smoking within 1 hour prior to test.
3.5.2 Consuming alcohol within 4 hours of test.
3.5.3 Performing vigorous exercise/ activity within 30 minutes of test.
3.5.4 Wearing tight clothes or any garments that restricts the chest or abdomen.
3.5.4 Eating large meal within 2 hours prior to test.

4. PROCEDURE:

4.1 Limitations of Methodology/ Validation of Results:
4.1.1 PFT is an effort —dependent test that require proper instructions and the cooperation of the patient.
4.1.2 In ability to perform acceptable maneuvers may be due to poor subject motivation or failure to understand inslructions.
4.1.3 Physically impaired may also limit the subject's ability to perform spirometry maneuvers.
4.1.4 The test should still be attempted with these limiting factors noted and taken into consideration when the results are interpreted.

4.2 Acceptability:
4.2.1 At least three acceptable FVC maneuvers should be performed. If the patient is unable to perform a single acceptable maneuver after eight attempts, test can be discontinued.
4.2.2 An acceptable test is:
4.2.2.1 No hesitation or false starts.
4.2.2.2 Absence of artifact during procedure (cough, leak, obstructed mouthpiece).
4.2.2.3 No early termination of exhalation.
4.2.2.4 Good start, good end.

4.3 Steps
4.3.1 Explain the purpose of the test, and the procedure of the patient.
4.3.2 Obtain PFT machine with new sensor.
4.3.3 Prepare patient for test:
4.3.3.1 Have the patient.
4.3.3.2 Loosen tight clothing
4.3.3.3 Removes Dentures.
4.3.3.4 Elevate chin and extend neck slightly use nose clip if necessary.
4.4.1 Demonstrate the test yourself.
4.4.2 Instruct the patient to:
4.4.2.1 Place teeth and lips around pneumotach sensor.
4.4.2.2 Do not block the opening with the tongue.
4.4.2.3 Take the deepest breath possible.
4.4.2.4 Then blow out as hard as fast and as completely as possible.
4.4.2.5 Instruct the patient to rest and wait before starling the next deep inspiration.

4.4 Enter Data: age, height, and gender are the key factors that help with determination of a normal PFT.
4.5 Use patient's last numbers for identifications.
4.6 Follow manufacturing guidelines for running the test. For Post Medication Testing:
4.7 Coach the patient during the test Take a big breath. Now blast out keep blowing harder that's good get it all out Good Job!"
4.8 PFT equipment may be removed from the base and taken to patient exam rooms. Delete previous information.
4.8.1 After completing all the pre-medication (baseline) testing and administering the Medication (2.5albuterol per nebulization treatment (wait 5-10 minutes) and repeat testing.
4.9 Print copy of results and give to provider. PFT Machine is calibrated monthly.

4.10 Documenting the progression of pulmonary disease —restrictive or obstructive. Documenting the effectiveness of therapeulic intervention.

5. MATERIALS AND EQUIPMENT:

5.1 Spirometer
5.2 Spirometers with electronics signal outputs (pneumotachs)

6. RESPONSIBILITIES:

6.1 Respiratory therapist

7. APPENDICES:

N/A

8. REFERENCES:

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8.2 Miller MR, Hankinson J, Brusasco V, et al. Standardization of spiromentry. Eur Respir J 2005; 26:319.
8.3 Morris OF, Koski a, Johnson LC. Sprirometric standards for healthy non-smoking adults. AM Rev Respir Dis 1971; 103;57.

9. APPROVALS:

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