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Micro Plus Spirometer Operating Procedure

Purpose The purpose of the Micro Spirometer Operating Procedure is to ensure the proper maintenance, tracking, and operation of the hand-held unit to provide accurate bedside pulmonary function testing.

Audience Respiratory Care Practitioners.

Scope The handheld spirometer will be utilized by trained RCS Personnel to perform bedside pulmonary functions. It is a precision instrument designed to measure Forced Expired Volume in one second, FEV₁, Forced Vital Capacity (FVC) Forced Expiratory Ratio (FER), and Peak Expiratory Flow.

Physician's Order An order for bedside pulmonary function screening by Respiratory Care Services is required unless the patient is receiving bronchodilator therapy.

Procedure

Step	Action
1	Verify Physicians order.
2	Assemble the spirometer with disposable mouthpiece.
3	Explain procedure to patient and demonstrate maneuver.
4	Switch the unit on, and follow manufacturer guidelines for setup. Instruct the patient to “Breathe in until your lungs are completely full, now seal your lips around the mouthpiece and blow out as hard and as fast as possible until you cannot push any more air out”
5	When the patient has completed this maneuver, obtain results.

Procedure Continued

Step	Action
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6	Perform three adequate maneuvers.
7	Record pulse oximetry values and any pertinent comments in the comments section.
8	Document results in EPIC.
9	The Hand Held Spirometer calibration is dependent only on the physical geometry of the digital volume transducer and provided that the transducer remains undamaged, will remain stable indefinitely. The unit should not therefore require recalibration.

Tracking

To be assigned each shift by the Team Leader. The therapist will return the unit to the Team Leader at the end of their shift or pass it on to the therapist assigned to that spirometer on the next shift.

If there is physical damage to the unit, return it to the Team Leader. It will be sent to Micro Medical for repair and recalibration.

Maintenance Follow manufacture guidelines.

Infection Control

Patients in isolation should be given a disposable peak flow meter. Otherwise, each patient on bronchodilator therapy should be given a disposable mouthpiece with a one-way valve (Microcheck Mouthpiece #3395) with the initial therapy.

Follow procedures as outlined Healthcare Epidemiology Policies and Procedures: #2.24 Respiratory Care Services.

<http://www.utmb.edu/policy/hcepidem/search/02-24.pdf>

References

Micro Spirometer Operating Manual

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