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| <b>Name of Policy:</b> <u>Symbols and Abbreviations</u><br><b>Policy Number:</b> 3364-136-PF-02<br><b>Department:</b> Pulmonary Services<br><b>Approving Officer:</b> Senior Hospital Administrator<br><b>Responsible Agent:</b> Director, Pulmonary Services<br><b>Scope:</b> The University of Toledo Medical Center<br>Pulmonary Services Department |  <p><b>Effective Date:</b> May 10, 2023</p> <p>Initial Effective Date: July 1, 1979</p> |
| <p> <input type="checkbox"/> New policy proposal                      <input checked="" type="checkbox"/> Minor/technical revision of existing policy<br/> <input type="checkbox"/> Major revision of existing policy                      <input type="checkbox"/> Reaffirmation of existing policy </p>   |   |

**(A) Policy Statement:**

The terms, symbols, abbreviations, and metrology definitions used when referring to pulmonary function procedures, test reporting, and test interpretation are based on a report of the American College of Chest Physicians / American Thoracic Society (ATS) and European Respiratory Society (ERS) Joint Committee on Pulmonary Nomenclature. Metrology definitions used are in accordance with the International Standards Organization (ISO) recommendations.<sup>i ii iii</sup>

**(B) Purpose of Policy:**

To provide uniform and clear reference to technical and clinical staff responsible for performing pulmonary function test procedures and interpreting of their results.

**Selected Specific Terms**

1. **Accuracy** is the closeness of agreement between the result of measurement and the true value.
2. **Reproducibility** is the closeness of agreement between the results and successive measurements of the same method, same observer, same instrument, same location, same condition of use, and time. If a test subject is given a bronchodilator drug and tested again after a period of 20 minutes, one needs to know the reproducibility of the test in order to make a decision of comparison.
3. **Repeatability** is when a technician tests a subject several times.

**Selected Symbols and Abbreviation**

**Spirometry**

FVC: Force vital capacity

FEV1: Forced exhaled volume in one second

FEF25-75: Mean forced expiratory flow between 25% and 75% of forced vital capacity

FEFmax: Maximal forced expiratory flow rate

FIVC: Forced inspiratory vital capacity

FIFX%: Instantaneous forced inspiratory flow at point where X% of the FVC has expired

### **Lung Volume**

TLC: Total lung capacity

SVC: Slow vital capacity

FRC: Functional residual capacity

TGV (or VTG): Total thoracic gas volume

IC: Inspiratory capacity

ERV: Expiratory reserve volume

RV: Residual volume

### **Diffusing Capacity**

DLCO: Diffusing capacity for the lung measured using carbon monoxide, also known as transfer factor

DLCO<sub>cor</sub>: Diffusing capacity adjusted for hemoglobin

DLCO/VA: Diffusing capacity for carbon monoxide per unit of alveolar volume, also known as KCO

### **Body Plethysmography**

Raw: Airways resistance

sRAW: Specific airways resistance (resistance / unit of lung volume)

Gaw: Airways conductance

sGaw: Specific airways conductance (conductance / unit of lung volume)

### **Cardiopulmonary Exercise Testing**

AT: Anaerobic threshold

HR: Heart Rate

MET: Metabolic equivalent

O<sub>2</sub> pulse: Oxygen pulse

PETCO<sub>2</sub>: End-tidal P<sub>co2</sub>

PETO<sub>2</sub>: End-tidal PO<sub>2</sub>

RER or R: Respiratory exchange ratio

RQ: Respiratory quotient

SpO<sub>2</sub>: Arterial oxygen saturation as indicated by pulse oximetry

V<sub>D</sub>: Physiologic dead space

V<sub>D</sub>/V<sub>T</sub>: Ratio of physiologic dead space to tidal volume

V<sub>o2</sub>: Oxygen uptake (consumption)

V<sub>E</sub>: Minute ventilation

V<sub>E</sub>/MVV: Ventilatory Reserve

V<sub>E</sub>/V<sub>O<sub>2</sub></sub>: Ventilatory equivalent for oxygen

V<sub>E</sub>/V<sub>CO<sub>2</sub></sub>: Ventilatory equivalent for carbon dioxide

V<sub>T</sub>: Tidal volume

WR: Work rate or power

### **Selected Metrology Definitions**

BTPS: Body temperature, ambient pressure, saturated with water vapor

L: Liters

L/min: Liters per minute

L/sec: Liters per second

mL: Milliliters

Hz: Hertz (cycles per second)

Lb: Pounds (weight)

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| <p><b>Approved by:</b></p> <p><u>/s/</u> _____ <u>5/17/2023</u><br/>         Michael Taylor<br/>         Director, Pulmonary Services<br/>         Date</p> <p><u>/s/</u> _____ <u>5/17/2023</u><br/>         Russell Smith<br/>         Senior Hospital Administrator<br/>         Date</p> <p><i>Review/Revision Completed By:<br/>         Director, Pulmonary Services</i></p> | <p><b>Review/Revision Date:</b><br/>         09/12/2005<br/>         08/05/2008<br/>         06/30/2011<br/>         02/27/2014<br/>         03/01/2017<br/>         06/01/2020<br/>         05/10/2023</p> <hr/> <p><b>Next Review Date:</b> May 2026</p> |
| <p><b>Policies Superseded by This Policy:</b></p>  |  |

<sup>i</sup> General Consideration for Lung Function Testing: Series “ATS/ERS Task Force: Standardization of Lung Function Testing” Eur Respir J 2005; 26: 153-161

<sup>ii</sup> ATS/ACCP Statement on Cardiopulmonary Exercise Testing Am J Respir Crit Med Vol 167. pp 211-1452

<sup>iii</sup> <http://www.thoracic.org/sections/publications/statements/index.html>