Name of Policy:	**RT Assess and Treat Protocol**
Policy Number:	3364-136-04-12
Department:	Respiratory Care
Approving Officer:	Chief Nursing Officer
Responsible Agent:	Director, Respiratory Care
Scope:	The University of Toledo Medical Center Respiratory Care Department

THE UNIVERSITY OF TOLEDO

Effective Date: 8/1/2018

X New policy proposal	_____ Minor/technical revision of existing policy
_____ Major revision of existing policy	_____ Reaffirmation of existing policy

(A) Policy Statement

The Respiratory Care Practitioner (RCP) will utilize the RT Assess and Treat Protocol to assess the patient for the purpose of determining the appropriate type(s) of therapy, frequency of therapy and criteria for continuing, changing or discontinuing the therapy. A physician must order "RT Assess and Treat per Protocol" or "RT Protocol" or "TDP" (Therapist Driven Protocol). Upon receiving the order, the RCP will follow the procedures described in this document to facilitate optimum patient care. If at any time the patient's clinical status deteriorates or an adverse event occurs, the physician will be immediately contacted.

(B) Purpose of Policy

To provide guidelines for the RCP for the implementation of the RT Assess and Treat Protocol. Copies of each protocol will be linked in the EMR for caregiver reference.

(C) Procedure

Clinical indications for this RT Assess and Treat Protocol include aerosolized bronchodilator medication therapy, bronchial hygiene therapy and lung volume expansion therapy. Patient assessments by RCP's are ongoing and concurrent with each RCP visit/treatment. A formal reassessment will be completed based on the severity score and PRN by the RCP if the patient's clinical status deteriorates. Therapy will then be adjusted as needed. Documentation of the RCP's patient assessment findings will be documented in the patient's EMR.

The following guidelines will be followed in evaluating a patient for therapy

Upon receiving a physician's order for the "RT Assess and Treat per Protocol", "RT Protocol" or "TDP" the RCP will:

1. Review the patient's chart for all pertinent information including:
   - Physician's order
   - Patient's History and Physical Examination
   - Physician's Progress Notes
   - Vital Signs
   - SpO2 on room air
   - Laboratory data
   - Surgical status
   - Diagnostic reports (e.g. x-rays, PFT's, various scans, sputum cultures, etc. if available)

2. Perform a physical assessment
   a) General observations: patient's color, pattern and effort of breathing, chest expansion (symmetrical and bilateral), level of consciousness and the ability to ambulate.
   b) Cough and sputum production: Ability to take a deep breath as measured using an Incentive Spirometer. Effectiveness of cough as assessed by measuring peak flows. The RCP will ask the patient to cough and expectorate into a tissue for observation of color and viscosity and determine if suctioning will be required. If the patient is unable to produce sputum, the RCP should question the patient with regard to their sputum production, color, consistency, frequency and amount.
   c) Percussion and palpation of the lung fields to assess and identify:
      - Areas of tenderness
      - Observe any chest wall abnormalities
      - Respiratory excursion and fremitis, to determine whether the underlying tissues are air-filled, fluid-filled or solid. This is not always indicated for all patients but can be helpful
   d) Auscultation of the lung fields (which will help to identify respiratory therapy objectives and care plan)
      - To evaluate the airflow through the tracheobronchial tree and detect any possible obstructions
      - Breath sounds
        - Normal
        - Crackles
        - Rhonchi
        - Wheezes or pleural rubs

After the patient's overall assessment is complete, the RCP will initiate one, two, or all three of the following protocols based on assessment findings:

Bronchodilator Aerosol Therapy

1. Perform initial assessment for Bronchodilator Aerosol Therapy. Indications for bronchodilator aerosol therapy include:
   - Relieve, reduce or prevent re-occurring bronchospasm
   - Relieve, reduce or prevent re-occurring airway inflammation and mucosal edema

2. Patients will be scored based on the RCP's findings as documented in the patient's EMR. The type and frequency of the therapy will be determined based on this score as it falls into one of four (4) acuity levels. These levels are "Minimal", "Mild", "Moderate" and "Severe".

   a) Minimal Score (0-2 points)
      - No indications for bronchodilators. Continue home regimen if applicable

   b) Mild Score (3-5 points)
      - Albuterol 2.5 mg or 2 puffs Q4hr PRN W/A x 2 tx with automatic DC at 24 hrs. if score remains ≤ 3

- Continue, review controller medications from home if applicable. Contact physician for adjustment of controller meds.
- RT to reassess within 72 hours

c) Moderate Score (6-8 points)
- Albuterol/Ipratropium MDI 2 puffs inhaled or nebulizer (0.5 mg Ipratropium/2.5 mg Albuterol) Q6 hr. W/A + Albuterol 2.5 mg nebulizer or 4 puffs inhaled Q2 hr. PRN for shortness of breath.
- Continue controller medications from home regimen if applicable
- RT to reassess within 48 hours

d) Severe Score (≥ 9 points)
- Ipratropium 0.5 mg/Albuterol 2.5 mg (DuoNeb) Q6 hr.
- Albuterol 2.5 mg Q2 hr. PRN
- Formal reassessment within 24 hours

If no improvement/poor response (> 12 hrs.) or near extremis, contact physician for consideration of:
- Pulmonary consult
- 5 mg Albuterol via SVN x 3 back-to-back treatments
- Increase dosing, progress to greater frequency
- Full face mask NPPV
- ICU admit
- Heliox therapy

Lung Expansion Therapy

1. Perform initial assessment for Lung Expansion Therapy. Indications for lung expansion therapy include:
   - Moderate hypoxemia while on oxygen therapy (e.g. SpO2 < 90% on 3-5 lpm O2 or greater)
   - Prevent or treat atelectasis

2. Patients will be scored based on the RCP's findings as documented in the patient's EMR The type and frequency of the therapy will be determined based on this score as it falls into one of four (4) acuity levels. These levels are "Minimal", "Mild", "Moderate" and "Severe".

   a) Minimal Score (0-2 points)
   - Deep Breathing / Cough – 3-5 maneuvers Q1hr. W/A – RT to perform initial coach

   b) Mild Score (3-5 points)
   - Deep Breathing / Cough – 3-5 maneuvers Q1hr. W/A – RT to perform initial coach with nurse to supervise ongoing
   - RT to reassess within 72 hours

   c) Moderate Score (6-8 points)
   - Positive expiratory pressure (PEP) device. Target of 10-20 cmH2O - TID
   - If no improvement/poor response after 12 hours of PEP therapy then…
   - CPAP @ 8-10 cmH2O for 2 hr. duration
   - RT to reassess within 48 hours

d) Severe Score (≥ 9)
- MetaNeb (CHFO/CPEP mode) Q4hr W/A x 24 hrs. then QID
- If no improvement/poor response after 24 hrs. of MetaNeb therapy then…
- Full face mask CPAP at 8-10 cmH2O x 3 hrs. Q6 hrs. x 24 hrs.

Bronchial Hygiene Therapy

Perform initial assessment for Bronchial Hygiene Therapy. Indications for bronchial hygiene therapy include:
- Difficulty with secretion clearance unresponsive to simpler techniques
- Atelectasis associated with mucous plugging
- History of Cystic Fibrosis, Chronic Bronchitis or Bronchiectasis

Patients will be scored based on the RCP's findings as documented in the patient's EMR. The type and frequency of the therapy will be determined based on this score as it falls into one of four (4) acuity levels. These levels are "Minimal", "Mild", "Moderate" and "Severe".

1. Minimal Score (0-2 points)
   - Deep Breathing / Cough – 3-5 maneuvers Q1hr W/A – RT to perform initial coach

2. Mild Score (3-5 points)
   - Deep Breathing / Cough – 3-5 maneuvers Q1hr W/A – RT to perform initial coach
   - If no improvement/poor response after 12 hours …
   - Acapella 3-5 maneuvers TID – RT to perform initial coach
   - RT to reassess within 72 hours

3. Moderate Score (6-8 points)
   - EZPap/Acapella/Percussion therapy TID. Vest therapy may be used if appropriate.
   - For Cystic Fibrosis/Bronchiectasis: Vest therapy Q6 hr. W/A x 24 hrs. then BID
   - For Neuromuscular cough weakness: Cough Assist Device Q6hr. W/A
   - RT to reassess within 48 hours

4. Severe Score
   - Intrapulmonary Percussive therapy (MetaNeb – CHFO & CPEP mode) Q4 hr.
   - If no improvement/poor response after 12 hrs. – increase MetaNeb therapy to Q2 hrs.
   - If no improvement/poor response, contact MD for consideration of bronchoscopy
   - Suction NT/Trach PRN
   - RT to reassess within 24 hours

REFERENCE:

1. AACP Position Paper – Respiratory Care Protocols 10/27/1992
2. Strickland SL, Rubin BK, Haas CF, et al. AARC Clinical Practice Guideline: Effectiveness of Pharmacologic Airway Clearance Therapies in Hospitalized Patients. Respir Care 2015; 60(7):1071-1077.
3. Colice GL, Carnathan B, Sung J, Paramore LC. A respiratory therapist-directed protocol for managing inpatients with asthma and COPD incorporating a long-acting bronchodilator. J Asthma 2005; 42(1):29-34.
4. Ford RM, Phillips-Clar JE, Burns DM. Implementing therapist-driven protocols. Respir Care Clin N Am 1996; 2(1):51-76.
5. Kester L, Orens DK. Constructing a therapist-driven protocol. Respir Care Clin N Am 1996; 2(1):27-49.
6. Nielson-Tietsort J, Poole B, Creagh CE, Repsher LE. Respiratory care protocol: an approach to in-hospital respiratory therapy. Respir Care 1981; 26(5): 430-436.

Approved by:	**Review/Revision Date:**
/s/ Michael Taylor Director, Respiratory Care — Date /s/ Monecca Smith Chief Nursing Officer — Date *Review/Revision Completed By:* *Director, Respiratory Care*	**Next Review Date:** August 1, 2021
Policies Superseded by This Policy:	

It is the responsibility of the reader to verify with the responsible agent that this is the most current version of the policy.