

## Respiratory Care Critical Element Pathway

Use this pathway for a resident who requires or receives respiratory care services (i.e., oxygen therapy, breathing exercises, sleep apnea, nebulizers/metered-dose inhalers, tracheostomy, or ventilator) to assure that the resident receives proper treatment and care.

### Review the Following in Advance to Guide Observations and Interviews:

- The most current comprehensive and most recent quarterly (if the comprehensive isn't the most recent) MDS/CAAs for Sections C, GG, J, and O.
- Physician's orders (e.g., nebulizers, inhalers, tracheostomy or ventilator interventions, times of administration, parameters for pulse oximetry).
- Pertinent diagnoses.
- Care plan (e.g., respiratory treatment and care, possible complications, communication, advance directives, equipment functioning and cleaning, procedures for emergencies).

### Observations:

- During the provision of any type of respiratory care/services, does staff perform hand hygiene before and after respiratory care or contact with respiratory equipment and ensure appropriate PPE is used? If not, describe.
- Respiratory Aerosolized Care (Nebulizer, Inhaler):** If concerns are noted, please describe:
  - Are sterile solutions (e.g., water or saline) used for nebulization;
  - Are single-dose vials used for only one resident;
  - If multi-dose vials are used, are manufacturer's instructions for handling, storing, and dispensing the medications followed;
  - If multi-dose vials are used for more than one resident, are vials dated when initially accessed, stored appropriately, and do not enter the immediate resident treatment area;
  - Are jet nebulizers used for only one resident? Are they cleaned and stored per facility policy, rinsed with sterile water, and air-dried between treatments on the same resident;
  - Are mesh nebulizers that remain in the ventilator circuit cleaned, disinfected, or changed at an interval recommended by manufacturer's instructions; and
  - Are nebulizers/drug combination systems cleaned and disinfected according to the manufacturer's instructions?
- Oxygen:**
  - What is the method of delivery (liters, room air or O<sub>2</sub>);
  - Does the resident have anxiety, distress, or discomfort? How does staff intervene;
  - What type of precautions are observed (e.g., proper handling of oxygen cylinders);
  - Are "No Smoking" signs present wherever oxygen is administered; and
  - How does staff clean and sanitize equipment, tubing, and the humidifier?
- Breathing Exercises:**
  - What breathing exercises are provided (coughing/deep breathing)? If therapeutic percussion/vibration or postural drainage is ordered, is it provided as written;
  - How does staff assess the resident's condition before and after the treatments and document respiratory rate, presence of dyspnea, signs of infection, level of cognitive functioning/ability to understand, presence of coughing, vital signs and pulse oximetry at a minimum, and the resident's response to the treatment; and
  - Does the resident's condition preclude the provision of the treatment? What does staff do (e.g., contacts the attending practitioner before providing the treatment)?

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### Mechanical Ventilation or Tracheostomy:

- Does the facility:
  - Have sufficient numbers of trained, competent, qualified staff, consistent with State practice acts/laws;
  - Identify who is authorized to perform each type of respiratory care service, such as mechanical ventilation, suctioning, and tracheostomy care; and
  - Specify the type and amount of supervision required, such as during the delivery of care of a resident receiving mechanical ventilation with or without tracheostomy care.
- How does staff provide direct monitoring of the resident;
- How does the resident make his/her needs known? How does staff respond;
- Does the resident have anxiety, distress, or discomfort? How does staff intervene;
- For a resident on mechanical ventilation, is the resident positioned as ordered;
- What is the condition of the resident's oral cavity, surrounding skin hygiene, and eyes;
- How does staff provide ongoing assessment of respiratory status and response;
- What are the settings of the ventilator, availability of power sources, and condition of emergency equipment including functioning alarms and emergency sterile tracheostomy equipment of the correct size available at the bedside? What is the electrical source for the ventilator? Is a manual resuscitator available;
- How do staff respond when an alarm sounds;
- What is the condition of the tracheostomy site, including cleanliness, signs of infection/inflammation (e.g., redness, swelling, bleeding or purulent discharge, odor and character of secretions), and condition of dressings, if present?
- When changing a tracheostomy tube, does trained, qualified, competent staff (based upon State practice Acts, State law, and professional standards of practice) wear a gown, use aseptic technique, and replace the tube with the correct size and one that has undergone sterilization or high-level disinfection;
- How does staff respond if the resident has signs of an obstructed airway or need for suctioning (e.g., secretions draining from mouth or tracheostomy, inability to cough to clear chest, audible crackles or wheezes, dyspnea, restlessness or agitation);
- Are clean, working suction equipment available to a source of emergency power, available for immediate use, including sterile suction catheters;
- Is sterile water used to fill humidifiers;
- Does staff take precautions not to allow condensate to drain toward the resident;
- Is a single-use open-system suction catheter employed, and a sterile, single-use catheter used with sterile gloves;
- Is sterile fluid used to remove secretions from the suction catheter if the catheter is used for re-entry into the resident's lower respiratory tract; and
- How are machines or equipment maintained and cleaned with an appropriate disinfectant and stored (e.g., in a clean store room with a clear plastic bag or clean tag on equipment)?

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**Resident, Resident Representative, or Family Interview:** Determine what method is used for communication with the resident, if it is accessible and used by all staff. Using the communication method, interview the resident.

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| <input type="checkbox"/> Do you have access to call systems and communication devices? If not, describe.               | <input type="checkbox"/> How are your respiratory needs being met?  |
| <input type="checkbox"/> How did the facility involve you in developing care plan decisions for your respiratory care? | <input type="checkbox"/> What information has been provided regarding the respiratory interventions used? |
| <input type="checkbox"/> How does the facility ensure care reflects your preferences and choices?                      | <input type="checkbox"/> What complications have you experienced, if any? What did staff do?              |
|  | <input type="checkbox"/> Does staff wash their hands before and after providing your care?                |

### Staff Interviews (Nurse, DON, Respiratory staff):

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| <input type="checkbox"/> Who provides ventilation or tracheostomy care? Is it in accordance to state law, State practice Acts, and standards of practice?   | <input type="checkbox"/> When and to whom do you communicate changes in the resident's condition, respiratory care, and equipment problems such as the mechanical ventilator, tracheostomy tube?                 |
| <input type="checkbox"/> Will you explain the process for mechanical ventilation including ventilator functioning, settings, use of equipment, troubleshooting, use of emergency equipment, types of airway and care, complications or emergencies, and how to intervene?   | <input type="checkbox"/> What are the procedures and availability of equipment and staff for emergency situations (e.g., decannulation, cardiac arrest, equipment malfunction) and who responds to alarms?       |
| <input type="checkbox"/> Who provides supervision? Who provides suctioning and emergency care?  | <input type="checkbox"/> For a resident on mechanical ventilation, is the resident at risk for accidental decannulation? What interventions are in place? Have there been any other ventilator related problems? |
| <input type="checkbox"/> What special procedures are used and what do you monitor (e.g., blood pressure, blood gases, respiratory rate, suction needs, and tracheostomy care)?  | <input type="checkbox"/> Who provides ongoing monitoring of equipment, including setting and monitoring ventilation equipment settings and assuring that component alarms are functioning?                       |
| <input type="checkbox"/> How does the resident respond to respiratory interventions?  | <input type="checkbox"/> Who is responsible to assure that machines or equipment used for respiratory care are properly working, maintained, and cleaned with a disinfectant?                                    |
| <input type="checkbox"/> When and what type of training have you received, and by whom? How often are competencies assessed?  | <input type="checkbox"/> What procedures are in place for power outages and other environmental emergencies?   |
| <input type="checkbox"/> Have you received training for: <ul style="list-style-type: none"><li>○ Specific respiratory interventions or care, including oxygen, nebulizer treatments;</li><li>○ Emergency interventions and use of equipment (including storage and disposal); and</li><li>○ Specific type of modality, including mechanical ventilation, tracheostomy care, suctioning.</li></ul> | <input type="checkbox"/> How are correct settings communicated from one staff person to another?   |
|   | <input type="checkbox"/> Will you describe infection control practices for respiratory care?   |

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### Record Review:

- What is the resident's respiratory status?
- Does the assessment reflect the resident's status that may be impacted by the respiratory care needs, such as:
  - Medical health status, including comorbidities that may affect the respiratory status, such as cognitive loss, neuromuscular or skeletal disorders, cardiovascular conditions, presence of upper or lower respiratory disorders, chronic infections, central nervous system disorders, and urinary or gastric disorders;
  - Respiratory function and identification of conditions that may be maintained or improved based upon interventions, or conditions that may indicate decline and need for specific comfort measures to meet respiratory needs;
  - Psychosocial needs such as for depression or anxiety;
  - Communication needs;
  - Oral hygiene needs and condition of the eyes;
  - Nutritional needs, bowel or bladder functioning, skin integrity, visual/hearing deficits; and
  - Advance directives.
- Does the assessment reflect the resident's mechanical ventilation status? Is there a potential for weaning? What is the resident's ADL status related to mechanical ventilation?
- Is the care plan comprehensive? Does it address identified respiratory care needs and other needs that may be impacted by respiratory care requirements, measurable goals, resident involvement, preferences, and choices? Has the care plan been revised to reflect any changes?
- Does the care plan record reflect resident specific monitoring of respiratory status, including but not limited to:
  - Type of ventilator equipment, settings, and alarms (refer to physicians orders, and manufacturers specifications for use and care); and
  - Type and size of airway and care of artificial airway.
- Does the care plan address resident specific risks for complications such as:
  - Unplanned extubation;
  - Aspiration and the potential for respiratory infection (tracheal bronchitis, ventilator associated pneumonia (VAP));
  - Nutritional complications related to tube feedings, gastric distress;
  - Increased or decreased CO2 levels;
  - Development of oral or ocular ulcers,
  - Barotrauma;
  - Deep vein thrombosis due to immobility; and/or
  - Airway complications such as tracheal infections, mucous plugging, tracheal erosion and/or stenosis.
- Does the record reflect if the resident has experienced any complications? If so, how did staff respond? Were care plan interventions changed if needed?
- Has the care plan been revised to reflect any changes?

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### Record Review (continued)

For **Mechanical Ventilation:**

- How does staff document equipment function:
  - Appropriate configuration/settings of the ventilator control panel;
  - Alarm function;
  - Cleanliness of filters; and
  - Cleanliness of self-inflating manual resuscitator.
- How does staff document equipment-related problems and responses:
  - Failure or malfunction of the ventilator equipment;
  - Inadequate warming or humidification of the inspired gases;
  - Inadvertent changes in ventilator settings;
  - Accidental disconnection of ventilator; and
  - Accidental decannulation.
- Is routine machine maintenance and care completed (e.g., water changes/tubing changes, safety checks on alarms, and machine functioning checks)?
- Does documentation include what ventilator equipment is used?
  - Type and characteristics;
  - Location and type of emergency manual resuscitator;
  - Type of ventilator power source including immediate provision of emergency power in case of outage;
  - Ventilator circuit (i.e., ventilator tubing, exhalation valve and attached humidifier) description, alarms, cleaning, assembly; and
  - Alarms for power failure or dysfunction and for high and low pressure, exhaled volume.
- Does the record reflect ventilator details, with physician orders for:
  - Times on and off;
  - Rate of oxygen;
  - Mode of ventilation;
  - Changes in relation to activity level such as exercise or sleep;
  - Acceptable limits of dialed/measured exhaled volume; and
  - Desired pressure ranges.
- Does the record reflect ventilator settings used according to physicians orders for:
  - Peak pressures;
  - Preset tidal volume;
  - Frequency of ventilator breaths;
  - Verification of oxygen concentration setting;
  - Positive End Expiratory Pressure (PEEP) level;
  - Appropriate humidification and temperature of inspired gases; and
  - Heat and moisture exchanger function.
- Does the record reflect the type of airway used according to physician orders (size, type, cuffed or uncuffed, double or single cannula)?
- Does the record reflect the care provided for an artificial airway?
  - Cuff inflation (conditions for inflation/deflation);
  - Airway cleaning, tube changes; and
  - Assessment and ongoing monitoring of respiratory functioning including the need for tracheal suctioning and who is allowed to provide tracheal suctioning according to State laws.
- Does the record reflect adjunctive interventions used (medications, aerosol [bronchodilator], chest physiotherapy, oxygen therapy, secretion clearance devices)?
- If concerns are identified for respiratory care, review the applicable facility policy for mechanical ventilation and other respiratory care provided.

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### Critical Element Decisions:

1. Did the facility provide specialized care needs for the provision of respiratory care including tracheostomy care and tracheal suctioning, in accordance with professional standards of practice, and the resident's care plan, goals, and preferences?  
If No, cite F695
2. Did the staff use appropriate hand hygiene practices and implement appropriate standard precautions?  
If No, cite F880
3. For newly admitted residents and if applicable based on the concern under investigation, did the facility develop and implement a baseline care plan within 48 hours of admission that included the minimum healthcare information necessary to properly care for the immediate needs of the resident? Did the resident and resident representative receive a written summary of the baseline care plan that he/she was able to understand?  
If No, cite F655  
NA, the resident did not have an admission since the previous survey OR the care or service was not necessary to be included in a baseline care plan.
4. If the condition or risks were present at the time of the required comprehensive assessment, did the facility comprehensively assess the resident's physical, mental, and psychosocial needs to identify the risks and/or to determine underlying causes, to the extent possible, and the impact upon the resident's function, mood, and cognition?  
If No, cite F636  
NA, condition/risks were identified after completion of the required comprehensive assessment and did not meet the criteria for a significant change MDS OR the resident was recently admitted and the comprehensive assessment was not yet required.
5. If there was a significant change in the resident's status, did the facility complete a significant change assessment within 14 days of determining the status change was significant?  
If No, cite F637  
NA, the initial comprehensive assessment had not yet been completed; therefore, a significant change in status assessment is not required OR the resident did not have a significant change in status.
6. Did staff who have the skills and qualifications to assess relevant care areas and who are knowledgeable about the resident's status, needs, strengths and areas of decline, accurately complete the resident assessment (i.e., comprehensive, quarterly, significant change in status)?  
If No, cite F641

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7. Did the facility develop and implement a comprehensive person-centered care plan that includes measureable objectives and timeframes to meet a resident's medical, nursing, mental, and psychosocial needs and includes the resident's goals, desired outcomes, and preferences?

If No, cite F656

NA, the comprehensive assessment was not completed.

8. Did the facility reassess the effectiveness of the interventions and review and revise the resident's care plan (with input from the resident or resident representative, to the extent possible), if necessary, to meet the resident's needs?

If No, cite F657

NA, the comprehensive assessment was not completed OR the care plan was not developed OR the care plan did not have to be revised.

**Other Tags, Care Areas (CA), and Tasks (Task) to Consider:** Dignity (CA), Right to be Informed and Make Treatment Decisions F552, Notification of Change F580, Accommodations of Needs (Environment Task), Choices (CA), Right to Refuse F578, Pressure Ulcer (CA), Nutrition (CA), Hydration (CA), Sufficient and Competent Staffing (Task), Facility Assessment F838, Medical Director F841, QAA/QAPI (Task).