Stage 2 Critical Elements for Ventilator-Dependent Residents

Facility Name: _____ Facility ID: _____ Date: _____

Surveyor Name: _____

Resident Name: _____ Resident ID: _____

Initial Admission Date: _____ Interviewable: ☐ Yes ☐ No Resident Room: _____

Care Area(s): _____

Use

Use this protocol for a sampled resident who is ventilator dependent to assure that the resident receives proper treatment and care.

Mechanical ventilation is defined as a life support system designed to replace and/or support normal ventilatory lung function. A ventilator-assisted individual (VAI) may require mechanical aid for breathing to augment or replace spontaneous ventilatory efforts to achieve medical stability or maintain life. Persons requiring long term invasive ventilatory support have demonstrated:

☐ An inability to become completely weaned from invasive ventilatory support, or

☐ A progression of disease etiology that requires increasing ventilatory support.

Procedure

☐ Briefly review the assessment, care plan, and orders to identify facility interventions and to guide observations to be made.

☐ Corroborate findings with record and interviews.

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Observations	
☐ Observe whether staff consistently implement the care plan over time and across various shifts. Staff are expected to assess and provide appropriate care from the day of admission. During observations of the interventions, note and/or follow up on deviations from the care plan as well as potential negative outcomes. ☐ Observe the delivery of resident care. Check or observe: ▪ Whether the resident is properly positioned; ▪ The need for suctioning, the respiratory status, and rates of respirations; ▪ Anxiety, distress, and how staff intervenes; ▪ Condition of the tracheostomy site, cleanliness, signs of infection/inflammation, and condition of dressings, if present; ▪ Proper infection control procedures are used, such as hand washing, the use of clean/sterile techniques (as appropriate), and condition of equipment; ▪ Settings of ventilator, power sources, availability, and condition of emergency use equipment; ▪ How staff communicate with the resident and how the resident makes his/her needs known, staff response to problems in a timely manner; and ▪ Condition of mouth and oral cavity and skin hygiene.	**Notes:**

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Resident/Representative Interview (if possible)	
Interview the resident and/or representative in order to determine: ☐ Involvement in care planning decisions; ☐ Whether the facility is respecting their preferences and choices; ☐ Whether the resident/representative think staff are providing proper care; ☐ Whether staff maintain the residents' access to call systems and communication devices; ☐ The resident's/representative's involvement if receiving respiratory treatments and therapies; ☐ Whether the resident/representative has received education in the resident's/representative's role in managing the resident's condition according to the resident's care plan; ☐ Whether staff are responsive if the resident/representative has a concern or problem, such as the trach tube coming out; and ☐ If the resident/representative understands the care the resident is to receive, and the resident's/representative's role in the management of the resident's condition (such as hand washing, protecting himself/herself from persons who have respiratory or other infections).	**Notes:**

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Staff Interviews	
Interview staff to determine knowledge regarding: ☐ Special procedures monitor resident status (e.g., blood pressure, blood gases, respiratory rate, suction needs, and tracheostomy care). ☐ How the resident is responding to his/her ventilator plan of care. ☐ Training staff received: ▪ For implementing care; ▪ Emergency interventions and use of equipment; and ▪ Provision of sufficient trained staff for residents who have ventilators. ☐ How staff communicate noticed changes in the resident's condition and equipment problems. ☐ Access to, and availability of, a respiratory therapist or other professionals for concerns with the ventilator and/or tracheotomy tube. ☐ Procedures for emergency situations (e.g., decannulation, cardiac arrest, equipment malfunction) and who responds to alarms: ▪ Whether the resident is at risk for accidental decannulation, and whether there have been any other ventilator related problems; ▪ How this information is communicated to staff; and ▪ System in place to obtain assistance and availability of help for emergency situations. ☐ Monitoring of equipment: ▪ To ensure component alarms are functioning; ▪ Machines are properly working, maintained, and clean; ▪ Responsibility for setting and monitoring ventilation equipment settings; and ▪ How are correct settings communicated from one staff person to another. ☐ Procedures in place for power outages.	**Notes:**

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Assessment	
Review the MDS, physician orders, progress notes, nurses' notes and other appropriate interdisciplinary notes (e.g., respiratory therapy) that may have information regarding the assessment. Based on observation of the resident, interviews with staff, and interviews with resident/responsible party (as possible), determine whether the assessment information accurately and comprehensively reflects that status of the resident. Determine whether the assessment addresses, as appropriate: ☐ Medical health status, including comorbidities that may affect the use of a ventilator, such as cognitive loss, neuromuscular or skeletal disorders, cardiovascular conditions, presence of upper and/or lower respiratory disorders, chronic infections, central nervous system disorders, and urinary and/or gastric disorders; ☐ Psychosocial needs such as depression or anxiety; ☐ Communication problems and issues, such as how to express needs/desires and the ability to summon help in emergency; ☐ Potential for weaning; ☐ Advance directive status; and ☐ ADL changes/limitations related to ventilator usage. ☐ Determine whether there was a "significant change" in the resident's condition and whether the facility conducted a significant change comprehensive assessment within 14 days. A "significant change" is a decline or improvement in a resident's status that: 1. Will not normally resolve itself without intervention by staff or by implementing standard disease-related clinical interventions, is not "self-limiting;" 2. Impacts more than one area of the resident's health status; and 3. Requires interdisciplinary review and/or revision of the care plan.	**Notes:**

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Assessment	
If there was a "significant change" in the resident's condition and the facility did not conduct a significant change comprehensive assessment within 14 days, initiate **F274, Resident Assessment When Required**. If a comprehensive assessment was not conducted, also cite F272.	
1. If the condition or risks were present at the time of the required comprehensive assessment, did the facility comprehensively assess the ventilator-dependent resident's needs for infection control and communication, and the impact upon the resident's function, mood, and cognition? ☐ Yes ☐ **No** **F272**	
☐ **NA, condition/risks were identified after completion of the required comprehensive assessment and did not meet the criteria for a significant change MDS**	
NOTE: Although Federal requirements dictate the completion of RAI assessments according to certain time frames, standards of good clinical practice dictate that the assessment process is more fluid and should be ongoing.	
*The comprehensive assessment is not required to be completed until 14 days after admission. For newly admitted residents, before the 14–day assessment is complete, the lack of sufficient assessment and care planning to meet the resident's needs should be addressed under **F281, Professional Standards of Quality**.*	

Stage 2 Critical Elements for Ventilator-Dependent Residents

Care Planning	
If the comprehensive assessment was not completed (CE#1 = No), mark CE#2 "NA, the comprehensive assessment was not completed". If the care plan refers to a specific facility treatment protocol that contains details of the treatment regimen, the care plan should refer to that protocol and should clarify any deviations from, or revisions to, the protocol for this resident. The treatment protocol must be available to the caregivers and staff should be familiar with the protocol requirements. Review the care plan for specific interventions, measurable objectives and timetables, risk/casual factors, and relevance to the resident. Determine whether the plan of care includes relevant factors, as appropriate, such as: ☐ Ventilator equipment: ▪ Type and characteristics ▪ Emergency manual resuscitator ▪ Ventilator power source (electrical/battery/generator power) ▪ Ventilator circuit – description, alarms, cleaning, assembly, and use ☐ Alarms for power failure or dysfunction and for high and low pressure, exhaled volume. ☐ Ventilator use: ▪ 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 ▪ Desired pressure ranges	**Notes:**

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Care Planning	
☐ Ventilator settings: ▪ Peak pressures ▪ Preset tidal volume ▪ Frequency of ventilator breaths ▪ Verification of oxygen concentration setting ▪ PEEP level ▪ Appropriate humidification and temperature of inspired gases ▪ Heat and moisture exchanger function ☐ Type of airway: ▪ Size and type ▪ Cuffed or uncuffed ▪ Double or single cannula ▪ Care of artificial airway: - Cuff inflation (conditions for inflation/deflation) - Airway cleaning, tube changes - Suctioning - Speaking tube operation, if appropriate ☐ Adjunctive interventions: ▪ Medications ▪ Aerosol (bronchodialator) ▪ Chest physiotherapy ▪ Oxygen therapy ▪ Secretion clearance devices	

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Care Planning	
☐ Psychosocial issues such as anxiety and/or depression ☐ Status of advance directives ☐ Communication: ▪ Functional call system and ▪ Resident communication methods, such as communication board ☐ Monitoring respirations and respiratory rates, heart rates, color changes, chest excursion, diaphoresis, lethargy, vital signs, and other monitoring procedures, such as: ▪ Pulse oximetry ▪ End-tidal CO2 ▪ Specimen collection as prescribed ▪ Pulmonary function ▪ Exhaled tidal volume ▪ Fraction of expired oxygen ☐ Observation for potential deterioration or acute change of the resident for medical complications, such as: ▪ Hypocapnia, Respiratory Alkalosis ▪ Hyperkapnia Respiratory Acidosis ▪ Hypoxemia Barotrauma ▪ Seizures/hemodynamic instability ▪ Airway complications ▪ Stomal or tracheal infections ▪ Mucous plugging ▪ Tracheal erosion and/or stenosis	

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Care Planning	
▪ Respiratory infection (tracheal bronchitis, pneumonia) ▪ Bronchospasms ▪ Exacerbation of underlying disease ▪ Natural course of the disease ☐ Monitoring of equipment function, such as: ▪ Appropriate configuration of ventilator circuit ▪ Alarm function ▪ Cleanliness of filter ▪ Power level of batteries ▪ Cleanliness of self inflating manual resuscitator ☐ Monitoring of equipment-related problems, such as: ▪ Failure of the ventilator ▪ Malfunction of equipment ▪ Inadequate warming or humidification of the inspired gases ▪ Inadvertent changes in ventilator settings ▪ Accidental disconnection of ventilator ▪ Accidental decannulation ☐ ADL assistance related to ventilator usage. ☐ If care plan concerns are noted, interview staff responsible for care planning as to the rationale for the current plan of care.	

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Care Planning	
2. Did the facility develop a plan of care with measurable goals and interventions to address all necessary issues related to the resident's ventilator use, in accordance with the assessment, resident's wishes, and current standards of practice? ☐ Yes ☐ **No** **F279** ☐ **NA, the comprehensive assessment was not completed** *The comprehensive care plan does not need to be completed until 7 days after the comprehensive assessment (the assessment completed with the CAAS). Lack of sufficient care planning to meet the needs of a newly admitted resident should be addressed under* ***F281, Professional Standards of Quality****.*	

Stage 2 Critical Elements for Ventilator-Dependent Residents

Care Plan Implementation by Qualified Persons	
Observe care and interview staff over several shifts and determine whether: ☐ Care is being provided by qualified staff, and/or ☐ The care plan is adequately and/or correctly implemented. **3. Did the facility provide or arrange services to be provided by qualified persons in accordance with the resident's written plan of care?** ☐ Yes ☐ **No** **F282** ☐ **NA, no provision in the written plan of care for the concern being evaluated** *NOTE: If there is a failure to provide necessary care and services, the related care issue should also be cited when there is actual or potential outcome.*	**Notes:**

Stage 2 Critical Elements for Ventilator-Dependent Residents

Care Plan Revision	
If the comprehensive assessment was not completed (CE#1 = No), OR, if the care plan was not developed (CE#2 = No), mark CE#4 "NA, the comprehensive assessment was not completed OR the care plan was not developed". Determine whether revisions were made to the care plan based upon the following: ☐ The effectiveness of care plan goals and interventions; and ☐ Changes in the resident's condition that required revised goals and care approaches. **4. Did the facility reassess the effectiveness of the interventions and review and revise the plan of care (with input from the resident or representative, to the extent possible), if necessary, to meet the needs of the resident?** ☐ Yes ☐ **No** **F280** ☐ **NA, the comprehensive assessment was not completed OR the care plan was not developed**	**Notes:**

Stage 2 Critical Elements for Ventilator-Dependent Residents

Provision of Care and Services	
Determine whether staff have: ☐ Recognized and assessed factors placing the resident at risk for ventilator complications, including specific conditions, causes and/or problems, needs and behaviors; ☐ Defined and implemented interventions for treatment and services related to ventilator use in accordance with resident needs, goals, and recognized standards of practice; ☐ Addressed the potential for infection; ☐ Monitored and evaluated the resident's response to interventions; and ☐ Revised the approaches as appropriate. **5. Based on observation, interviews, and record review, did the facility provide care to meet the special care needs of the resident with a ventilator?** ☐ Yes ☐ **No** **F328**	**Notes:**

Stage 2 Critical Elements for Ventilator-Dependent Residents

Concerns with Independent but Associated Structure, Process, and/or Outcome Requirements	
During the investigation of care and services related to ventilator use, the surveyor may have identified concerns with related structure, process and/or outcome requirements, such as the examples listed below. If an additional concern has been identified, the surveyor should initiate the appropriate care area or F tag and investigate the identified concern. Do not cite any related or associated requirements before first conducting an investigation to determine compliance. ☐ **Notification of Change** — Determine whether staff: ▪ Consulted with the physician regarding significant changes in the resident's condition, including the need to alter treatment significantly or failure of the treatment plan; and ▪ Notified the resident's representative (if possible) of significant changes in the resident's condition. ☐ **F271, Admission Orders** — Determine whether the facility received physician orders for provision of immediate care before conducting the comprehensive assessment and developing an interdisciplinary care plan. ☐ **F278, Accuracy of Assessments** — Determine whether staff that are qualified to assess relevant care areas and are knowledgeable about the resident's status, needs, strengths, and areas of decline conducted an accurate assessment. ☐ **F281, Professional Standards of Quality** — Determine whether the interventions defined or care provided appear not to be consistent with recognized standards of practice. If the interventions defined, or care provided, appear not to be consistent with recognized standards of practice, interview one or more health care practitioners and professionals as necessary (e.g., physician, charge nurse, director of nursing, respiratory therapist) who, by virtue of training and knowledge of the resident, should be able to provide information about the causes, treatment and evaluation of the resident's condition or problem. If the attending physician is unavailable for medical	**Notes:**

Stage 2 Critical Elements for Ventilator-Dependent Residents

Concerns with Independent but Associated Structure, Process, and/or Outcome Requirements	
questions, interview the medical director, as appropriate. Depending on the issue, ask about: ▪ Changes in condition that may justify additional or different interventions; ▪ How it was determined that chosen interventions were appropriate; ▪ How they validated the effectiveness of current interventions; ▪ Risks identified for which there were no interventions; ▪ How they monitor the approaches for specific approaches for the provision of care related to the use of ventilator programs (for example, policies/procedures; staffing requirements; how staff identify problems, assess the resident, and develop and implement action plans; how staff monitor and evaluate resident's responses, etc.); ▪ Adequate power source, including emergency AC power and DC power by (external/internal batteries); ▪ Alarms such as resident disconnect alarms, high pressure and back up alarms for alerting staff (if adverse consequences are a risk); ▪ Humidification system based on medical needs, such as heated humidifier with temperature probes and heat and moisture exchanger used during transport; ▪ Emergency resuscitation equipment, such as self inflating resuscitation bag with tracheostomy attachments and mask, replacement tracheostomy tubing, and suction equipment, including battery powered aspirator for use when transporting and supplemental oxygen; ▪ Staff training for weekday, weekend, and temporary staff in issues such as: - How to set up, use, trouble shoot, and maintain equipment and supplies;	

Stage 2 Critical Elements for Ventilator-Dependent Residents

Concerns with Independent but Associated Structure, Process, and/or Outcome Requirements	
- Use and application of additional techniques, such as suctioning and ancillary equipment; - Resident assessment and ongoing response; - Response to hazards and emergencies; and - Failure of equipment. ▪ Infection control procedures such as: - Handwashing and barrier protection; - Disposal of medical waste; - Environmental air exchange; and - Maximizing protection of resident through influenza and pneumonia immunizations, minimizing exposures with persons with acute URIs, MRSA, and VRE. ☐ **Nutrition** — Determine whether staff identified risk factors and implemented interventions for a resident who has unplanned weight gain or loss, or other nutritional concerns related to ventilator usage. ☐ **Hydration** — Determine whether staff identified risk factors and implemented interventions for a resident who is not consuming sufficient fluid intake to maintain proper hydration and health. ☐ **Sufficient Nursing Staff** — Determine whether the facility had qualified staff in sufficient numbers to assure the resident was provided necessary care and services, based upon the comprehensive assessment and care plan. ☐ **F385 Physician Supervision** — Determine whether the physician has assessed and developed a treatment regimen relevant to respiratory care and responded appropriately to the notice of changes in condition.	

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Concerns with Independent but Associated Structure, Process, and/or Outcome Requirements	
☐ **Rehabilitation** — Determine whether professional respiratory therapy staff provided services according to physician's orders and standards of practice. ☐ **F501 Medical Director** — Determine whether the medical director ▪ Assisted the facility in the development and implementation of policies and procedures for respiratory care and ventilator treatment, and that these are based on current standards of practice; and ▪ Interacts with the physician supervising the care of the resident if requested by the facility to intervene on behalf of the resident with a ventilator. ▪ If the surveyor determines that the facility is not in compliance with any of these related requirements, the appropriate F tag should be surveyor initiated. ☐ **F514, Clinical Records -** Determine whether the clinical records: ▪ Accurately and completely document the resident's status, the care and services provided in accordance with current professional standards and practices; and ▪ Provide a basis for determining and managing the resident's progress, including response to treatment, change in condition, and changes in treatment.	