

Stage II – 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	
<input type="checkbox"/> 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.	Notes:
<input type="checkbox"/> Observe the delivery of resident care. Check or observe: <ul style="list-style-type: none">▪ 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.	

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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).

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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

Notes:

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Staff Interviews	
<ul style="list-style-type: none"> ▪ How are correct settings communicated from one staff person to another. <p><input type="checkbox"/> Procedures in place for power outages.</p>	
Assessment	
<p>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:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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; <input type="checkbox"/> Psychosocial needs such as depression or anxiety; <input type="checkbox"/> Communication problems and issues, such as how to express needs/desires and the ability to summon help in emergency; <input type="checkbox"/> Potential for weaning; <input type="checkbox"/> Advance directive status; and <input type="checkbox"/> ADL changes/limitations related to ventilator usage. <p>1. Did the facility adequately assess specific resident needs for infection control, communication? <input type="checkbox"/> Yes <input type="checkbox"/> No F272</p> <p><i>The comprehensive assessment is not required to be completed until 14 days after admission.</i></p>	<p>Notes:</p>

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Assessment	
<p><i>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.</i></p> <p><i>Note: The facility may have completed a 5–day assessment for the Medicare beneficiary. Use the 5–day assessment as the comprehensive review only if it was completed with the RAPS.</i></p>	
Care Planning	
<p>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.</p> <p>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:</p> <p><input type="checkbox"/> Ventilator equipment:</p> <ul style="list-style-type: none"> ▪ Type and characteristics ▪ Emergency manual resuscitator ▪ Ventilator power source (electrical/battery/generator power) ▪ Ventilator circuit – description, alarms, cleaning, assembly, and use <p><input type="checkbox"/> Alarms for power failure or dysfunction and for high and low pressure, exhaled volume.</p> <p><input type="checkbox"/> Ventilator use:</p> <ul style="list-style-type: none"> ▪ Times on and off 	<p>Notes:</p>

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Care Planning

- 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

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

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Care Planning

- Adjunctive interventions:
 - Medications
 - Aerosol (bronchodialator)
 - Chest physiotherapy
 - Oxygen therapy
 - Secretion clearance devices
- 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

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Care Planning

- Hypoxemia Barotrauma
- Seizures/hemodynamic instability
- Airway complications
- Stomal or tracheal infections
- Mucous plugging
- Tracheal erosion and/or stenosis
- 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

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Care Planning	
<p><input type="checkbox"/> ADL assistance related to ventilator usage.</p> <p><input type="checkbox"/> If care plan concerns are noted, interview staff responsible for care planning as to the rationale for the current plan of care.</p> <p>2. Did the facility develop a care plan that addresses all necessary issues related to the ventilator use? <input type="checkbox"/> Yes <input type="checkbox"/> No F279</p> <p><i>The comprehensive care plan does not need to be completed until 7 days after the comprehensive assessment (the assessment completed with the RAPS). Lack of sufficient care planning to meet the needs of a newly admitted resident should be addressed under F281.</i></p> <p><i>Additionally, lack of physician orders for immediate care (until staff can conduct a comprehensive assessment and develop an interdisciplinary care plan) should be addressed under F271.</i></p>	
Care and Services Meet Professional Standards	
<p>Interviews with Health Care Practitioners and Professionals: 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 questions, interview the medical director, as appropriate. Depending on the issue, ask about:</p> <p><input type="checkbox"/> Changes in condition that may justify additional or different interventions;</p> <p><input type="checkbox"/> How it was determined that chosen interventions were appropriate;</p> <p><input type="checkbox"/> How they validated the effectiveness of current interventions;</p>	<p>Notes:</p> <p style="text-align: center;">z</p>

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Care and Services Meet Professional Standards

- 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;
 - 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.

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Care and Services Meet Professional Standards	
<p><input type="checkbox"/> Infection control procedures such as:</p> <ul style="list-style-type: none">▪ Handwashing and barrier protection;▪ Disposal of medical waste;▪ Environmental air exchange; and▪ Maximizing protection of resident through influenza and pneumonia minimizing exposures with persons with acute URIs, MRSA and VRE.	
<p>3. Did the facility implement practices that meet professional standards of quality? <input type="checkbox"/> Yes <input type="checkbox"/> No F281</p> <p><i>NOTE: If the care plan addressed the risks and identified needs of the resident, but the care plan was not implemented as written, consider F282 for failure to implement the care plan.</i></p>	
Care Plan Revision	
<p>Determine whether revisions were made to the care plan based upon the following:</p> <ul style="list-style-type: none"><input type="checkbox"/> The effectiveness of care plan goals and interventions; and<input type="checkbox"/> Changes in the resident's condition that required revised goals and care approaches.	<p>Notes:</p>
<p>4. Did the facility revise the care plan as needed? <input type="checkbox"/> Yes <input type="checkbox"/> No F280</p>	

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Provision of Care and Services	
<p>Criteria for Compliance with F328, Special Needs, for a resident with a ventilator—the facility is in compliance with F328 if staff have:</p> <ul style="list-style-type: none"><input type="checkbox"/> Recognized and assessed factors placing the resident at risk for ventilator complications, including specific conditions, causes and/or problems, needs and behaviors;<input type="checkbox"/> Defined and implemented interventions for treatment and services related to ventilator use in accordance with resident needs, goals, and recognized standards of practice;<input type="checkbox"/> Addressed the potential for infection;<input type="checkbox"/> Monitored and evaluated the resident’s response to interventions; and<input type="checkbox"/> Revised the approaches as appropriate. <p>If the resident did not receive the necessary treatment and/or services related to the use of a ventilator: cite F328.</p> <p>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? <input type="checkbox"/> Yes <input type="checkbox"/> No F328</p>	<p>Notes:</p>

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Concerns with Structure, Process, and/or Outcome Requirements Related to Process of Care

During the investigation of the provision of care and services related to ventilator use, the surveyor may have identified concerns with related outcome, process and/or structure requirements. The surveyor is cautioned to investigate these related requirements before determining whether non-compliance may be present. Some examples of requirements that should be considered include the following (not all inclusive):

- F157 Notification of Changes** — Determine whether staff notified the physician and the resident’s representative of significant changes in the resident’s condition or failure of the treatment plan.
- F325 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.
- F327 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.
- F353 Sufficient 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.
- F406 Specialized Rehabilitative Services** — Determine whether professional respiratory therapy staff provided services according to physician’s orders and standards of practice.

Notes:

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Concerns with Structure, Process, and/or Outcome Requirements Related to Process of Care

- 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.