REMOVAL OF MECHANICAL VENTILATION IN THE DYING PATIENT

GUIDELINES FOR NURSING STAFF
FROEDTERT HOSPITAL, MILWAUKEE, WISCONSIN

Introduction

This guideline has been developed to assist staff in providing a compassionate process for removing mechanical ventilation (RMV) in the dying patient. This guideline is to be used when death is the expected outcome following RMV. Examples include patients with severe irreversible brain injury, metastatic cancer, overwhelming sepsis, etc.

A discussion of the legal/ethical basis for this guideline is provided in the Froedtert Hospital Policy CPM.0027: *Policy on withdrawal or withholding of life-sustaining treatment.*
http://intranet.fchhome.com/Froedtert/Policies/CorporatePolicies/Multidisciplinary/WithdrawalorWithholdingofLifeSustainingTreatment.htm

Step 1 Decision and Documentation

1. The prognosis, options and goals of care have been fully explored with the patient/ legal surrogates/family; consensus has been reached that RMV with expected death is the optimal treatment course. The Attending Physician must be involved in this discussion. The patient's primary nurse, social worker, chaplain and palliative care nurse may be included in this discussion unless the family requests otherwise. Related issues to be discussed prior to RMV include:

   - ❑ withdrawal of artificial hydration/feeding
   - ❑ withdrawal of blood pressure support
   - ❑ withdrawal of antibiotics and blood products
   - ❑ withdrawal of ET tube after ventilator is discontinued
   - ❑ wishes concerning organ donation-(contact WDN to determine options)

   Note: there is no compelling ethical or medical rationale for continuing any of these treatments once a decision has been made to RMV.

2. The Attending Physician documents in the medical record the date/time of the RMV discussion, who was present and the agreed goals and plan. A DNR order is written.
3. When prolonged survival is expected, the Palliative Care team is notified of the plan for RMV and potential for transition to the Inpatient Palliative Care unit.
4. A time/date is established for RMV.
5. For additional resource, please refer to ***Fast Fact: Ventilator Withdrawal Protocol (eperc End of Life Palliative Education Resource Center)***

http://www.eperc.mcw.edu/fastFact/ff_33.htm

Step 2 Preparation for RMV

1. A senior physician (attending physician or fellow or senior resident) will be available before, during and immediately after RMV, to supervise symptom control and provide counseling/support to family and staff. An order is written to discontinue mechanical ventilation.
2. The primary nurse and physician will provide information to the patient or family **(see appendix A- Discussion points for educating Patients/families about ventilator withdrawal):**
   - ❑ who can attend during the RMV process;
   - ❑ potential outcomes: rapid vs. delayed death, potential symptoms/signs;

   process of withdrawal: Ventilator, ET tube, other tubes;
3. For additional resource, please refer to ***Fast Fact: Information for Patients and Families (eperc End of Life Palliative Education Resource Center)***
   http://www.eperc.mcw.edu/fastFact/ff_35.htm
4. Notify Respiratory Therapy of RMV timing; ask therapist to be present.
5. Notify chaplain; ask family/surrogates if they wish chaplain or other clergy present before or during RMV.
6. Pre-medication for sedation is indicated. (Note: the primary goal of sedation to prevent dyspnea post extubation; unintentional apnea following sedative administration may occur, but in general, if all parties are agreed upon the plan of care, a decision to continue with ventilator withdrawal is appropriate; reversing agents (e.g. Narcan) should not be administered.
   - ❑ Discontinue paralytics and test for return of neuromuscular function.

An example of pre-medication protocol:

- ❑ Administer a bolus dose of morphine 2-10 mg IV and start a continuous morphine infusion at 50% of the bolus dose/hr (fentanyl or hydromorphone are acceptable alternatives).
- ❑ Administer 1 to 2 mg of midazolam IV (or lorazepam). (Note: Sedation should also be administered to the comatose patient.)
- ❑ Titrate meds to minimize anxiety and achieve the desired state of sedation prior to extubation.
- ❑ Have additional medication (morphine and versed or lorazepam) drawn up and ready to administer at the bedside, if needed to provide symptom relief.

7. There are other acceptable agents and protocols for pre-medication sedation.
   Please refer to :
   Fast Fact: Symptom Control for Ventilator Withdrawal in Dying Patients (eperc End of Life Palliative Education Resource Center) http://www.eperc.mcw.edu/fastFact/ff_34.htm
8. If previously discussed and agreed to, discontinue blood pressure support medication, artificial hydration and feeding, remove OG/NG tubes.
9. Remove restraints and unnecessary medical paraphernalia. Discontinue vital signs, labs, x-rays, pulse oximetry.

Step 3 Removal of Mechanical Ventilation

1. Ensure adequate sedation;
2. Prepare space at the bedside for family members.
3. Ask Respiratory Therapist to silence all ventilator alarms; set FIO_2 to 21% and remove PEEP. Observe for signs of respiratory distress, adjust medication
4. Reduce IMV rate to 4 and/or pressure support to 6 over 5-15 minutes. Observe for signs of respiratory distress and adjust medications to optimize patient comfort. Deflate endotrachial tube cuff, extubate and suction (if necessary) once comfort is achieved and the family consent to extubation. Remove ventilator from bedside.
5. In some situations, it may be desirable to leave the endotracheal tube in for Pt comfort. In these rare cases, have T-piece available at bedside.
6. Observe for signs of respiratory distress, adjust medication.

Step 4 Actions following RMV

1. Document in the medical record the procedure, medications and immediate outcome of the process of RMV.
2. Continually monitor for adequate sedation.
3. Transfer to Inpatient Palliative Care unit other non-ICU bed if patient status remains stable (for example, after 2 hours).

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Appendix A

Discussion points for Staff in educating Patients and families about ventilator withdrawal

The support of families is a critical aspect of care for the dying patient who is to be removed from a ventilator. Before withdrawal, the following issues should be discussed.

Potential outcome of ventilator withdrawal

When all other life-sustaining treatments have been stopped, including artificial hydration and nutrition, there are several possible outcomes: rapid death within minutes (typically patients with sepsis on maximal blood pressure support), death within hours to days, or stable cardiopulmonary function leading to a different set of care plans, including potential hospital discharge. If the latter possibility is realistic, future management plans should be discussed prior to ventilator removal, since some families may desire to resume certain treatments, notably artificial hydration/nutrition. Generally, by the nature of the underlying illness and the established goals, it is fairly easy to predict which category will be operative, but all families should be prepared for some degree of prognostic uncertainty.

The procedure of ventilator withdrawal

Explain how the family, clergy and others can be at the bedside before, during and after withdrawal. If asked, explain and model that they can show love and support through touch, wiping of the patient's forehead, holding a hand and talking to him or her.

Never make assumptions about what the family understands; describe the procedure in clear, simple terms and answer any questions. Families should be told before-hand the steps of withdrawal and whether or not it is planned/desired to remove the endotracheal tube. In addition, they should be counseled about the use of oxygen and medications for symptom control. Tell families that the sedative medication may lead to decreased breathing, but this does not represent euthanasia or assisted suicide. Assure them that the patient's comfort is of primary concern. Explain that breathlessness may occur, but that it can be managed. Confirm that you will have medication available to manage any discomfort. **Ensure they know that the patient will likely need to be kept asleep to control their symptoms and that involuntary moving or gasping does not reflect suffering if the patient is properly sedated or in a coma.**

Support the decision

When a family is able to make a definite decision for ventilator withdrawal, such a decision is always emotionally charged. Families will constantly second-guess themselves, especially if the death appears to linger following ventilator withdrawal. Support, guidance and leadership from the entire medical team is crucial, as the family will be looking to the team to ensure them that they are "doing the right thing". Furthermore, it is common for families to have concerns that their decision constitutes euthanasia or assisted suicide—explicit support, education and explanations from the team will be needed.

REMOVAL OF MECHANICAL VENTILATION IN THE DYING PATIENT

NURSING TIP SHEET
(Not a part of the Patients permanent record)

Progress Notes

___Chart documentation: goal of care and plan; Date/time for RMV is established

___Decisions established re: hydration/feeding/pressors/antibiotics/ET tube

Orders

___DNR order

___Order to discontinue ventilator

___Pre-medications and emergency medications at bedside for pain, dyspnea, sedation

___End of Life Order Supplement should be completed as appropriate

Staff

___Respiratory therapy, Palliative Care (if consulted), Social Service, Chaplaincy, notified

___Offer Child Life Specialist, Music Thanantologist if indicated

___Senior physician is present for RMV (Attending, Fellow, Senior Resident)

Families

___Information provided to families

___Referral call to Wisconsin Donor Network

Procedural steps

___Ventilator alarms silenced

___Suction equipment ready

___T-piece and/or aerosol delivery devices available at bedside if indicated

___Restraints removed