

PREVENTION OF VENTILATOR-ASSOCIATED PNEUMONIA

GOAL: PREVENT VENTILATOR-ASSOCIATED PNEUMONIA (VAP) AND DEATHS FROM VAP AND OTHER COMPLICATIONS IN PATIENTS ON VENTILATORS BY RELIABLY IMPLEMENTING A SET OF INTERVENTIONS KNOWN AS THE "VENTILATOR BUNDLE."

Background:

- § VAP is an important source of morbidity and mortality in critically ill and postoperative patients receiving mechanical ventilation. VAP is caused by a number of factors, including aspiration of gastric secretions.
- § VAP occurs in up to 15% of patients receiving mechanical ventilation. Risk factors include tracheostomy, multiple central line insertions, reintubation, and the use of antacids. The hospital mortality rate of ventilator patients who develop VAP is 46%, compared to 32% for ventilator patients who do not develop VAP.
- § At Metro Health, our VAP rate is 4.3%.
- § VAP is associated with prolongation of mechanical ventilation, ICU stay, and hospital stay, and associated increases in costs.
- § Evidence-based guidelines for the prevention of VAP have been developed by government agencies (e.g., CDC) and professional organizations (e.g., Canadian Critical Care Trials Group and Canadian Critical Care Society).
- § These guidelines are implemented on every patient in our ICU, and assessed every day the patient is in the ICU.
- § The Institute of Medicine has identified the prevention of nosocomial infections, including VAP, as a priority area for national action.

WHAT YOU NEED TO KNOW ABOUT VENTILATOR-ASSOCIATED PNEUMONIA (VAP):
A FACT SHEET FOR PATIENTS AND THEIR FAMILY MEMBERS

Ventilator-Associated Pneumonia (VAP) is a lung infection that can happen to patients who are on ventilators (machines to help them breathe). This infection is very serious. About 15% (1 or 2 out of 10) of patients on ventilators get VAP. About half of the patients with VAP die from it.

Some hospital patients need help breathing, either because they have just had a major operation or because they are very ill. These patients are often placed on a ventilator, a machine that supplies regular breaths through a tube inserted in the patient's mouth, nose, or through a hole in the front of the neck. Most of these patients recover, and the ventilator can be removed. However, there are proven ways to help prevent VAP - and patients and families can help to make sure these things are done.

A bundle of 4 care steps to prevent VAP:

Doctors and nurses can help prevent VAP by using a bundle of 4 "care steps." Hospitals find that when all 4 of these steps are done that there are almost no cases of VAP. The bundle of care steps are:

1. Raising the head of the patient's bed between 30 and 40 degrees.
2. Giving the patient medication to prevent stomach ulcers.
3. Preventing blood clots when patients are lying very still.
4. Seeing if patients can breathe on their own when waking up after surgery.

How family members can help:

Ask the nurses and doctors these questions:

Are you going to raise the head of the bed when (patient) is on the ventilator?

How are you going to prevent stomach ulcers?

What will you do to prevent blood clots?

When can (patient) try breathing on his/her own?

**LEARN MORE ABOUT VENTILATOR-ASSISTED PNEUMONIA AS IT RELATES TO
THE 100,000 LIVES CAMPAIGN ON www.ihl.org**



INSTITUTE FOR HEALTHCARE IMPROVEMENT

20 University Road, 7th Floor, Cambridge, MA 02138 (617) 301-4800