DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY MEDICAL COMMAND
2748 WORTH ROAD
JBSA FORT SAM HOUSTON, TEXAS 78234-6000

REPLY TO
ATTENTION OF

OTSG/MEDCOM Policy Memo 14-083
17 OCT 2014

MCHO-CP-A

Expires 17 October 2016

MEMORANDUM FOR COMMANDERS, MEDCOM REGIONAL MEDICAL COMMANDS

SUBJECT: Prevention of Ventilator-Associated Pneumonia (VAP)

1. References:

a. Memorandum, Under Secretary of Defense, 14 August 2007, subject: Preventing Ventilator-Associated Pneumonia in Department of Defense Beneficiaries.

b. Institute for Healthcare Improvement (IHI), "How-to Guide: Prevent Ventilator-Associated Pneumonia" (February 2012). Accessed on website: http://www.ihi.org/resources/Pages/Tools/HowtoGuidePreventVAP.aspx.

c. Institute for Healthcare Improvement (IHI), "Implement the IHI Ventilator Bundle" (2014). Accessed on website: http://www.ihi.org/resources/Pages/Changes/ImplementtheVentilatorBundle.aspx.

d. CDC, The National Healthcare Safety Network (NHSN), Ventilator-associated Event (VAE) Protocol (January 2014). Accessed on website: http://www.cdc.gov/nhsn/PDFs/pscManual/10-VAE_FINAL.pdf.

e. R. Douglas Scott II; Division of Healthcare Quality Promotion; National Center for Preparedness, Detection and Control of Infectious Diseases; Coordinating Center for Infectious Diseases; and Centers for Disease Control and Prevention; "The Direct Medical Cost of Healthcare-Associated Infections in US Hospitals and the Benefits of Prevention" (March 2009). Accessed on website: http://www.cdc.gov/HAI/pdfs/hai/Scott_CostPaper.pdf.

f. The Military's Health Systems Partnership for Patients Campaign. Implementation Guide for Ventilator Associated Pneumonia. 13 August 2012.

2. Purpose: This policy memorandum directs Commanders to incorporate health care delivered to patients placed on ventilators at the patient's bedside whose measures that have been shown to prevent or reduce VAP as described in the current scientific

*This policy memo supersedes OTSG/MEDCOM Policy Memo 11-051, 22 June 2011, subject: Prevention of Ventilator-Associated Pneumonia (VAP).

literature. In addition, this policy requires Commanders of Army Military Treatment Facilities (MTF) with Intensive Care Units (ICU) to report to the National Healthcare Safety Network (NHSN) patients on ventilators exceeding 48 hours. Reports to the NHSN will be made by trained Infection Preventionists (IP).

3. Proponent: The proponent for this policy is the Clinical Performance Assurance Directorate, Patient Safety Program.

4. Applicability:

a. This policy applies to all MTFs providing care to adult patients who are intubated and ventilated in an adult ICU, including tracheostomy patients who are on continuous ventilation.

b. Exclusions: This policy does not apply to:

(1) Neonatal intensive care patients and pediatric patients (less than 18 years of age as described in the NHSN definition).

(2) Patients on devices such as nasal continuous positive airway pressure (CPAP or hyoCPAP) because such devices are not considered ventilators.

(3) Patients with limited time, i.e., less than 24 hours, on a ventilator, such as during post-anesthesia recovery or while awaiting transfer.

5. Background:

a. VAP is the leading cause of death among patients with hospital-acquired infections. Patients who develop VAP have a mortality rate of 46% compared to 32% for ventilated patients who do not develop VAP. In addition, VAP is a costly complication, adding an estimated $25,000 to a typical hospital admission. VAP prolongs time on the ventilator, length of ICU stay, and length of hospital stay after discharge from the ICU.

b. Care bundles are groupings of best practices with respect to a disease process that individually improve care but, when used together, result in substantially improved care. Applying IHI's ventilator bundle can markedly reduce the incidence of VAP. The IHI ventilator bundle has five key components:

(1) Elevation of the Head of the Bed to between 30 and 45 degrees.

(2) Daily "Sedation Vacations" and Assessment of Readiness to Extubate.

(3) Peptic Ulcer Disease Prophylaxis.

(4) Deep Venous Thrombosis Prophylaxis as indicated.

(5) Daily Oral Care with Chlorhexidine. (Peridex)

6. Policy:

a. VAP prevention measures, which are based on current national standards, will be standardized throughout the MEDCOM to include the deployed arena.

b. All MTF ICUs caring for ventilated patients must meet the minimum standards provided in the IHI ventilator bundle. Additional strategies beyond the IHI's five bundle components may also be utilized to improve care and should be based on medical evidence, patient population, and facility resources. MTFs that care for ventilated patients for limited periods of time (for example, less than 24 hours or patients awaiting transfer) will implement as many of the IHI bundle components as appropriate for the length of time the patient is at the facility (for example, elevating the head of the patient's bed, deep venous thrombosis (DVT) prophylaxis, peptic ulcer disease (PUD) prophylaxis).

7. Responsibilities:

a. MTF Commanders will ensure implementation of the IHI ventilator bundle in their facilities. Regional IP leads will monitor compliance with implementation and reporting. Commanders will appoint appropriate individuals to collect and report compliance data as needed per the infection control risk assessment.

b. The MTF IPs will be the resource person with respect to bundle components and the NHSN reporting system. Probable VAP and Possible VAP definitions will be used as described by the NHSN for inter-hospital comparisons. See Reference 1d for such definitions.

c. MTFs that have patients on ventilators for at least 48 hours and have sufficient ventilator days will have their IPs report outcome data to the NHSN. Please refer to Reference 1d for NHSN reporting requirements.

8. Procedures:

a. Implementation of the ventilator bundle. Each MTF will determine specific procedures to implement the ventilator bundle components. Standing orders for the five items in the bundle may be the most efficient method for implementing these interventions. Standing orders would require the physician to specifically discontinue the interventions if contraindications exist.

(1) Elevating the head of the patient's bed to between 30 and 45 degrees. All personnel caring for the patient have the responsibility to maintain the head of the bed elevated with minimal interruptions.

(2) DVT prophylaxis. Specific prophylaxis for DVT should be based on the patient's co-morbid conditions and risk of both DVT and bleeding. DVT prophylaxis may be considered compliant if either anticoagulant therapy or mechanical therapy is present. This bundle component can be implemented in facilities that provide time-limited ventilator care prior to transfer.

(3) PUD prophylaxis. Specific contraindications should be identified. This bundle component can be implemented in facilities that provide time-limited ventilator care prior to transfer.

(4) Sedation interruption once every 24 hours. Local MTF specific policy will define the most appropriate time and process for sedation and its interruption to assess the patient's readiness to be extubated. This component may not apply to facilities that have ventilated patients for less than 24 hours. In that instance the item is considered compliant, but reported as not applicable (N/A). Contraindications to the bundle component should be documented in the patient record.

(5) Oral care. Per IHI, as of May 2010, the recommended daily oral care includes a 0.12% chlorhexidine solution. Oral decontamination reduces the bacteria load on the oral mucosa and the potential for bacterial colonization in the upper respiratory tract. This reduction in bacteria has been shown to reduce the potential for ventilator-associated pneumonia in patients on mechanical ventilation. Local MTF policy will define the process, time frames, and products for effective and comprehensive oral hygiene.

b. Data collection and reporting.

(1) Local MTF policy will establish the data collection process to implement this OTSG/MEDCOM policy memorandum. Process data is often difficult to obtain and merely collecting data from electronic medical records does not indicate compliance. Outcome data, NHSN VAP Rate, is therefore the key indicator to assess improvement as long as adequate denominator data exists (30 ventilator days per month). In facilities where an adequate denominator does not exist, MTF IP will report this to the Regional IP lead as part of the ongoing IP quality program.

(2) The MTF IPs are responsible for collating and reporting outcome data within the organization and to the NHSN and regional IP leads as required. MTFs that have sufficient outcome data (according to the NHSN requirements) will report in the NHSN monthly using the prescribed definitions in Reference 1d.

(3) Data should be trended over time with analysis that is applied to outcomes.

FOR THE COMMANDER:

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Chief of Staff