

Centra Health Reduces Ventilator-Associated Pneumonia Rates

Lynchburg, VA.

Centra Health in Lynchburg, Va., has been providing routine oral cleansing to its patients for several years. But when the medical intensive care unit at Centra's Lynchburg General Hospital experienced a total of six ventilator-associated pneumonia cases in 2002, Mary Ann Tate, RN, MSN, CCRN went into action.

The benefits of performing this daily hygiene are enormous for our patients. We knew we could achieve better results, said Tate, who is the critical care clinical nurse specialist for Centra Health. She investigated oral care products for ventilator patients and selected Sage Product's Toothette® Oral Care Complete Suction System. According to Tate, the results have been outstanding.

Between April 2003 and December 2003, the MICU has experienced only three ventilator-associated pneumonia (VAP) cases. Two cases occurred in October, which characteristically is high season for colds and flu, and are considered to be outliers. Centra Health estimates that the implementation of an oral care protocol for ventilator patients has prevented at least three VAP cases for an approximate savings of \$120,000.

Our surgical intensive care unit and four other participating intensive care units also have experienced a 50 percent decrease in VAP rates since implementing the oral care protocol on ventilator patients, said Tate.

Oral Care for Ventilator Patients

Centra Health is a regional, nonprofit health care system. In addition to Lynchburg General Hospital, the health system includes Virginia Baptist Hospital, a nursing home, behavioral health centers, a family practice residency program and physicians' offices.

Committed to patient safety and patient-focused care, Centra Health's medical-surgical ICU also participates in the Institute for Health Care Improvement (IHI) Idealized ICU and VHA Inc.'s Transformation of the ICU (TICU) programs. Both of these programs have impacted the organizations quest for patient safety and improvement programs.

Centra Health always had performed good oral care on patients admitted into the MICU. The unit had experienced low VAP rates, but the nurses wanted to improve their rates.

Reducing nosocomial infections and ventilator-associated pneumonia rates were the primary drivers for implementing an oral care protocol for ventilator patients, said Tate. This was consistent with our overall facility goals of lowering hospital-acquired infection rates, below the benchmark for the Centers for Disease Prevention and Control, National Nosocomial Infection Surveillance System (NNIS), and making our environment safer for our patients.

Management decided to implement an oral care protocol for all six critical care units with patients on ventilators, including the cardiac care unit, the cardiovascular recovery unit and the neurological unit.

Centra Health's clinical staff, which had been using Sage Products Toothette® swabs, learned of Sage's Toothette® Oral Care Complete Suction System from a hospital physician. Tate contacted Sage to request a product demonstration.

The results came rapidly after nurses started to use the suction system. By February 2003, Centra

Health had developed an oral care protocol and routinely began using the oral care suction system on all ventilator patients. A formal policy was adopted within two months that required the oral cavity to be assessed every shift by a registered nurse. All unconscious or intubated patients are provided with oral care every two hours, or as needed. Intubated patients are assessed to determine the need for removal of oropharyngeal secretions every four hours as well as prior to repositioning the tube or deflation of the cuff.

Training

Staff participated in a series of in-service training and received educational materials on the new oral care products. Sage representatives assisted with trainings and provided some of the materials used for instruction.

We had full organizational support for implementation of this protocol, said Tate. of course, with implementation of any new product a cost issue arose. But we saw that if our organization could reduce VAP rates, we could reap the benefits of decreasing patient length of stay rates and save money in the long run.

Clinicians are, understandably, very busy, said Tate. While the unit manager distributed e-mail communications to staff reminding them to use the oral care kits, I conducted surveillance of my own. I visited patient rooms to see if the kits were being used and reminded staff to post a new kit each day and/or use the kit.

Now Tate works with new clinicians at patients bedsides to educate them about the value of the oral care protocol. I review the entire protocol with each staff person to make sure we have consistency and understanding, she adds.

Trust

Tate's investigation of oral care products for ventilator patients included other companies. Tate, however, preferred Sage's offering because of the sheath over the Yankauer that protects the product from environmental debris when nurses lay it down.

The product packaging was another great feature that she believes helps nursing staff easily administer and document morning, mid-day and evening oral care. The three units in one packet is a good reminder to staff of how to implement our protocol. It serves as an effective check-up system, said Tate.

Sage's service has been positive throughout the partnership. Once the decision was made to proceed with an oral hygiene program for ventilator patients, Sage quickly supplied the organization with oral care kits so that data collection could begin immediately. Sage also was helpful in streamlining efforts to keep adequate amounts of product stocked in the units.

They made a big effort to help us out with very short notice, adds Tate.

Nursing staff enjoys using the oral care suction system and are surprised at the sharp decrease and near elimination of VAP. To keep momentum and sense of pride going, unit managers provide nursing staff with regular information on VAP cases and rates. Management, too, is pleased with the programs success and cost savings.

It's a struggle to implement new products and get education in place, but the rewards are great, said Tate.

Tate's advice for other hospitals is to have a clinical specialist spearhead an oral care initiative and analyze the data to prove the value and successful outcomes of an oral care program.