

10 days (interquartile range, 6-16) for 2009 group and 5 days (interquartile range, 3-10) for 2010 group;  $P < .01$  (Fig. 1).

**Conclusions:** The multifaceted implementation strategies of an evidence-based protocol that paired SATs and SBTs reduced the reintubation rate, duration of mechanical ventilation, ICU LOS and hospital mortality at a tertiary academic center.

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## References

- [1] Girard TD, et al. Efficacy and safety of a paired sedation and ventilator weaning protocol for mechanically ventilated patients in intensive care (Awakening and Breathing Controlled trial): a randomized controlled trial. *Lancet* 2008;371:126-34.
- [2] Curtis R, et al. Intensive care unit quality improvement: a "how-to" guide for the interdisciplinary team. *Crit Care Med* 2006;34:211-8.
- [3] Byrnes MC, et al. Implementation of a mandatory checklist of protocols and objectives improves compliance with a wide range of evidence-based intensive care unit practices. *Crit Care Med* 2009;37:2775-81.

## Best Nursing Critical Care Study

### RUFAIDAH ALASLAMIAH AWARD

**Implementation and compliance to ventilator associated pneumonia prevention bundle in a private health care facility in the United Arab Emirates**

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**Background:** Ventilator-associated pneumonia (VAP) is a very serious hospital-acquired infection that increases mortality, morbidity, hospital length of stay, and costs. An organized approach toward VAP prevention includes education and training of the ICU team, followed by regular monitoring and feedback on VAP prevention.

**Objectives and Purpose of Intervention:** The objective of the intervention is to reduce VAP rates in our ICU by implementing a VAP prevention bundle with an oral care protocol using a Plan, Do, Check, Act cycle.

Our ventilator bundle elements consisted of the following:

- Hand hygiene;
- Head of bed elevation;
- Daily assessment for readiness to wean and sedation vacation;
- Gastric ulcer prophylaxis and prevention of gastric overdistension—nasogastric feeding, medications, checking gastric residue 4 hourly and holding feeds before major position changes;
- Deep venous thrombosis prophylaxis—pneumatic compression devices, anticoagulants if not contraindicated
- Oral care protocol—oral brushing 12 hourly, oral care 4 hourly (soft oral sponge) chlorhexidine mouth wash 8 hourly, deep oral suction before position change, cuff deflation, and extubation;
- Chest physiotherapy 3 times daily; and
- Position changes 2 to 3 hourly and early mobilization.

**Intervention:** All endotracheally intubated and mechanically ventilated patients from our multidisciplinary ICU were included in the performance improvement project. Patients were excluded if they had a contraindication for any of the ventilator bundle elements or for oral care.

In January 2009, a ventilator bundle with an oral care protocol as planned after an intensive teaching and training program for the ICU nurses was implemented.

**Results:** Ventilator-associated pneumonia rates were monitored for a period of 24 months from January 2009 to December 2010.

It has drastically decreased after implementing the ventilator bundle with oral care protocol from 5.8% in 2008 to no VAP in 2009 and 2010.

Ventilator-associated pneumonia prevention compliance audit, which was conducted from January 2010 until December 2010, showed more than 95% compliance with individual VAP prevention measures.

**Conclusion:** Implementation of a comprehensive program including ventilator bundle and oral care protocols resulted in a significant reduction in the VAP rates that was sustainable over time.

Education sessions designed to inform nurses about importance of ventilator bundle and its use to prevent VAP have had a significant effect in improving the knowledge level, which, in turn, has improved the clinical practice.

The implementation of daily audits and communication of audit results to the ICU team encouraged compliance and reinforced the preventive interventions.

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## Best Healthcare Management Study

### IBN TILMEEZ AWARD

**Biopsychosocial impacts of laughter yoga and therapy on stroke survivors**

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With limited resources and challenges facing health practitioners working with stroke patients, more creative and innovative interventions are required. Although it is normally only considered cliché that "laughter is the best medicine," specific medical theories and documented research attribute improved health and well-being to laughter. This study examined the biopsychosocial impact of laughter yoga and therapy on stroke patients in South Africa. A quasiexperimental research design was used involving 2 groups. The laughter group participated in movement exercises using laughter yoga and therapy, whereas the control group participated in the same exercises without the laughter yoga and therapy. Physiologic tests were performed to measure the respondent's blood sugar levels as well as their blood pressure during the pretest and posttest. A pretest and posttest relating to the psychosocial functioning of the respondent's using the PANAS scale as well as a self-reported symptom checklist were administered.

The results of the study indicated that laughter yoga and therapy had positive biopsychosocial impacts on the laughter group. Evidence of lowered blood pressure, lowered blood sugar levels, enhanced mobility, improvement in speech and increase in positive emotions, and enhanced social functioning was visible in the laughter group. There was no significant difference in the biopsychosocial functioning of the control group. Because laughter yoga and therapy do not require any specific equipment or

resources, it was found to be the most economical, nonpharmacologic intervention for the stroke patients.

In view of the therapeutic benefits, the researchers recommend that laughter yoga and therapy be used as complementary alternate medicine as well as be integrated into psychotherapy, psychiatry, and other biopsychosocial interventions for the prevention as well as treatment of stroke.

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Best Students Category (Medical, Nursing, Allied Healthcare) Study

ALZAHRAWI AWARD

Computer keyboards and mice contamination at intensive care unit in Western Region in Kingdom of Saudi Arabia

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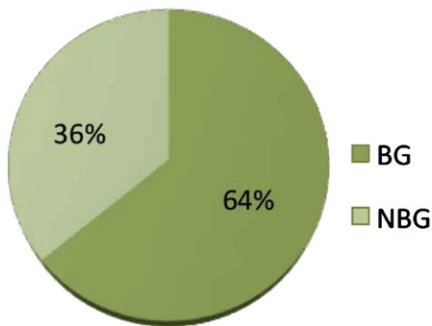


Fig. 2 The chart shows percentage of different isolated bacteria.

**The aim:** The aim of this study is to examine the bacterial contamination of computer user interface (keyboard and mouse) of physician workstation at different intensive care units (ICUs) in Jeddah City, in 2011.

**Introduction:** Nosocomial infections are important cause of hospital morbidity and mortality creating increase medical costs [1]. Because of increasing the cost of health care through increase, the length of hospitalization, treatment with expensive medications, and use of other services such as laboratory test, x-ray, and transfusion services. In United States, the estimates demonstrate that 2 million patients a year become infected, with the annual cost ranging from \$4.5 billion to \$11 billion [2]. World Health Organization studies found that the highest prevalence of nosocomial infections occurs in ICUs and acute care surgical and orthopedic wards (World Health Organization, 2002). The most common mode of transmission of exogenous pathogens is hand carriage by nursing and medical staff [3]. Computer technology for the management of individual patient medical records has become essential tool in all aspect of modern medicine.

Unfortunately, they have been identified as reservoirs for microorganisms, contributing to the transfer of pathogens to patient [4-6].

**Method:** The study was conducted at the Microbiology laboratory in King Abdulaziz University Hospital, Jeddah City, Kingdom of Saudi Arabia.

**Type of Samples:** Swab samples were collected from keyboards and mice of the computers at the physician’s workstation in ICU of 5 hospitals in Jeddah City, Kingdom of Saudi Arabia.

**Procedure of Samples Collection:** A total number of 84 swab specimens were collected from 42 computers (42 keyboards and 42 mice). A sterile swab moistened with sterile distilled water was firmly moved over the surface being tested.

Each swab was inoculated into 2 mL of brain heart infusion broth and transported immediately to the bacteriology laboratory.

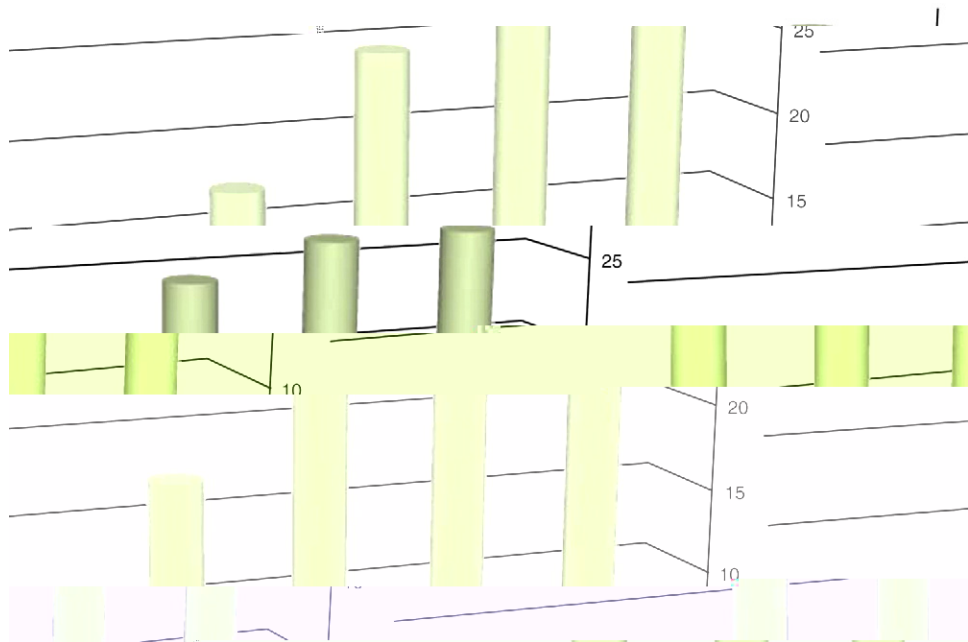


Fig. 3 The chart shows percentage of different isolated bacteria.