

One Hospital's Victory Over Hospital Acquired Infections Zero for 18 Months and Counting

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Overview

Bon Secours, St. Francis Medical Center, a 319-bed facility located in Midlothian, VA, opened in September of 2005 using the LifeSync® Wireless ECG System with the LeadWear® Disposable Cable Replacement System as part of their safety strategy and infection control program in the Critical Care Units. Specific Critical Care Units include the following: ICU (10 beds), Telemetry (21 beds), IVCU (6 beds), Medical (36 beds) with Remote Telemetry (8 beds), Surgical (36 beds) and the New Life Center (21 beds).

As a result of the zero central line infections and ventilator associated pneumonia rates in the critical care areas, Bon Secours OR Adopted the LifeSync® ECG System.

- "The surgical site infection (SSI) rate had been very good before the wireless ECG system began to be used in the OR, but after the first four months of using the system, the SSI rate dropped 40% without any changes being made to any other infection prevention practice."³
- "The decrease in the total number of infections and the corresponding costs that were avoided as a result of implementing this new wireless and disposable system paid for the system in the first two months of use."³
- MedMined, a Cardinal Health company, tracks infections and their corresponding impact to hospital budgets. They have determined that 4 percent of infections wipe out 185% of net inpatient operating profits.⁴

As of July 2008, Bon Secours has experienced 18 months with zero central line infections or ventilator associated pneumonia events.⁵

Background

St. Francis' administrators are aware of the estimated two million hospital acquired infections (HAI) that occur each year.⁴ These HAI's result in 90,000 deaths a year, millions of days added to the patients' length of stay and an estimated \$30.5 billion in added hospital costs each year.⁴ St. Francis had an opportunity to implement solutions and technologies to protect their patients from adding to those statistics. Ricky de Jesus, Administrative Director for Critical Care at Bon Secours St Francis Medical Center stated, "A lot of research shows that even after you attempt to clean a room, there have been positive cultures on surfaces for MRSA and VRE in different ICU rooms. So, what I attempted to do was to eliminate as many of the factors that could potentially hold this MRSA and VRE."¹

Bon Secours identified ECG leadwires as a hidden area of infection within the hospital. A study conducted by Dr. Paul Brookmeyer from the University of Wisconsin Hospital



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and Clinics found that out of 100 randomly selected ECG lead wires tested, 77% were contaminated with one or more nosocomial pathogens.² De Jesus commented that "No matter how much you attempt to clean, there's always things that stay behind, the disposable leads provided an option for not having to be cleaning between patients for the transmission of disease."¹

As of October 2008, the Centers for Medicaid and Medicare (CMS) will not reimburse hospitals for some HAI's. Ricky De Jesus estimated that the cost associated with any wound infection to be \$20,000 per patient. As infection rates increase the hospital's bottom line decreases. The use of disposables may help to lower infections therefore increasing a hospital's bottom line.¹

"Hidden Areas of Infection"

- Mission Critical Education Piece

A new public health education program, entitled "Hidden Areas of Infection," (<http://www.missioncriticaltv.com/index-8-1.html>) documents how an acute care facility in Virginia is solving this enormous infection control problem through planning, education, and the right equipment -- including the widespread use of disposable products. Prime targets for disposable technologies are reusable products that see use on thousands of different patients, which can dramatically increase the risk of cross-contamination. Examples include blood pressure cuffs, pulse oximetry sensors, and electrocardiogram (ECG) wires.¹

References:

- ¹ Mission Critical: *Hidden Areas of Infection*. Public Health Education Program. Production script obtained 8/25/08 from Capital Media Group, Inc. (LS-954)
- ² Jancin, B. (2004, March). Antibiotic-resistant pathogens found on 77% of ECG lead wires. *Cardiology News*. vol 2.
- ³ Barnett, Todd. (2007, August). The not-so-hidden costs of surgical site infections. *AORN Journal*, 86 (2), 249-258.
- ⁴ Hess & Finck. Real-Time Infection Protection. *Healthcare Informatics*. August 2007.
- ⁵ Signed statement by Ricky de Jesus Administrative Director, Critical Care Bon Secours St. Francis Medical; Midlothian, VA.