

LESSON LEARNED: Evidence-based prevention strategies in conjunction with a multi-disciplinary team effort are effective in reducing CDI rates.

Presentation Number 9-425

Catheter-associated Urinary Tract Infection (CAUTI): A Significant Case for Concern

Paula Mann RN, BSN, MS, Infection Preventionist, Covenant Health; Christie Vandynoff BSN, RN, Infection Preventionist, Covenant Health; Lynette Kingsberry MT, MSMP, (ASCP), Infection Preventionist, Covenant Health; Rebecca Horne RN, Infection Preventionist, Covenant Health; Kim Strelczyk MSN, RN, ACNS-BC, CIC, Interim Infection Prevention Director, Covenant Health

ISSUE: The CAUTI rates in our intensive care units and rehabilitation unit from 10/1/2010-12/31/11 were higher than National Healthcare Safety Network (NHSN) comparison rates. According to our own hospital financial data for the same time period, length of stay for patients with CAUTI increased on average 5.24 days for each of the identified 325 cases. During this time frame, CAUTI cases incurred an additional 1.5 million dollars in direct costs with an additional profit loss of 2.4 million dollars. CAUTIs

represent significant patient safety and financial burdens that are preventable.

PROJECT: The aim of this project was to evaluate current practices in care of patients with foley catheters. A house-wide point prevalence study (PPS) was completed to evaluate compliance with CAUTI prevention measures (foley maintenance).

RESULTS: The CAUTI prevention practices PPS measured compliance with the following evidence-based practices: catheter securement, tamper evident seal (TES) intact, absence of dependent loop, catheter below bladder level, drainage bag not touching floor, and drainage bag not overfilled. TES compliance measured the lowest at a rate of 39% (see Table 1). One of the most important things we learned as a result of our PPS, was that the medical facilities (as a cost-saving effort) do not stock "closed system Urine Meter Foley Trays." This requires staff to break the TES in order to attach the appropriate collection bag. Data from intensive care units revealed that 100% of patients with a foley had the TES broken. Compliance issues with securement device and tubing loops were also of concern with compliance rates under 56%. Once results of our PPS and the financial data were shared with Leadership, IP obtained approval for acquisition of closed system foley catheter kits as well as, an effective securement device. We also found that the existing foley bundle policy and procedure was not well-understood and/or being consistently practiced.

LESSON LEARNED: Our PPS identified significant gaps in nursing practice outlined in our hospital policy and procedures, which negatively impacted CAUTI rates. We have a need for additional education regarding care of patients with foley catheters, including a nurse-driven protocol for removal. Most importantly, the hospital learned that less expensive products do not always equate to better financial results. IP can affect results by serving as expert consultants to leadership and to nursing colleagues in the implementation of evidence-based practices.

Practice Compliance

| Unit | Cases Present to IP | Securement Compliant | % TES Compliant | % Loop Compliant |
|-----------------------|---------------------|----------------------|-----------------|------------------|
| MICU | 8 | 50% | 50% | 88% |
| SICU 3rd Fl | 5 | 100% | 0% | 0% |
| SICU 4th Fl | 7 | 57% | 0% | 71% |
| Card. Tele/SS | 7 | 43% | 14% | 43% |
| HCS | 3 | 100% | 0% | 67% |
| SE* | 3 | 33% | 67% | 33% |
| E5/Temp E6 | 7 | 100% | 43% | 71% |
| S6(E&W) | 3 | 33% | 67% | 0% |
| S7/Temp E7 | 8 | 100% | 63% | 88% |
| S8(E&W) Critical Care | 9 | 78% | 33% | 44% |
| S9 | 8 | 88% | 63% | 50% |
| S10 | 3 | 100% | 33% | 67% |
| MC92/Parl. | 8 | 88% | 50% | 25% |
| Wd/Rehab | 1 | 100% | 0% | 100% |
| Overall | 84 | 76% | 39% | 55% |

Presentation Number 9-426

Ventilator Associated Pneumonia: A Lean Six Sigma Tiger Team Approach to the Collection of High-Quality Respiratory Culture Samples

Catherine A. Adamson RN, BSN, Quality and Safety Nurse Champion, University of California Davis Medical Center; Linda J. Cooke RN, BSN, CCRN, Clinical Resource Nurse/Quality and Safety, UC Davis Medical Center

ISSUE: Ventilator Associated Pneumonia (VAP) is the leading cause of death from hospital-acquired infections and can result in increased mortality, prolonged stays in the intensive care unit, and up to \$40,000 in increased cost per occurrence. At our 631-bed university hospital, a VAP reduction program was initiated in 2010. Although an initial decrease in VAP was noted, concerns remained regarding the accuracy of upper versus lower airway culture specimens. Endotracheal (upper airway) aspirates are analyzed semi-quantitatively, and can represent tube colonization. Bronchoscopic or non-bronchoscopic alveolar lavage (lower airway: BAL or mini-BAL) are analyzed quantitatively. The question became, are endotracheal aspirate specimens leading to false positive culture results and negatively impacting our VAP rate?