Decreasing the Burden of Data Collection Using Electronic Surveillance
Sinai Hospital of Baltimore

Program/Project Description.
As of January 1, 2010, The Joint Commission National Patient Safety Goal which states that hospitals shall perform hospital-wide surveillance for Central Line Blood Stream Associated Infections (CLABSI), Catheter Associated Urinary Tract Infection (CAUTI) and Ventilator Associated Pneumonia (VAP). Infection Prevention and Control collaborated with Information Systems to create a daily line list of all patients admitted to the hospital whom had a central line or foley catheter or who are on a ventilator. This data is collected electronically everyday at the same time utilizing the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) definition for collection of device days.

The problem
To be compliant with NHSN standardized data collection methods Infection Prevention desired an automated system of collecting device days to improve data integrity regarding device associated infections.

Problem 1: Create an electronic system that would assist the Infection Preventionist with hospital-wide surveillance for any patient admitted to the hospital that had a central line, foley catheter or who was on a ventilator. This system also keeps an accurate count of device days needed for calculating rates for CLABSI, CAUTI, and VAP infections.

Infection Prevention recognized discrepancies in reports generated from multiple programs. Concerns regarding these discrepancies were discussed with electronic surveillance software consultant and areas of improvement were identified.

Problem 2: To improve utilization and effectiveness of reports generated using electronic surveillance software. To better utilize electronic surveillance system for real-time alerts and assist Infection Preventionist with hospital wide surveillance for Central Line Blood Stream Associated Infections (CLABSI), Catheter Associated Urinary Tract Infection (CAUTI) and Ventilator Associated Pneumonia (VAP).

Goals of creating an electronic system:
• To create an electronic system for hospital-wide surveillance for capturing patients with a central line, foley catheter, or who are on a vent
• To have an electronic system to count device days at the same time everyday utilizing the CDC NHSN definition
• To create an electronic system that would work in conjunction with Safety Surveillor

Process.
The Infection Prevention and Control Department collaborated with Information Systems Department to develop and implement an electronic system to identify patients with a central line, foley catheter or ventilator. Information Systems utilizes a tool called PowerInsight. The system is designed to capture all data electronically.

Solution.
The PowerInsight reports are generated based on the completion of the nursing assessment by the nurse. Information Systems developed program to generate daily reports for each unit individually. Multiple conference calls with WebEx capability were scheduled. Electronic surveillance report parameters were revised to meet the needs of Infection Prevention and Control.

Measurable Outcomes.
The results of implementing this electronic surveillance were the ability to collect device days and track patients with a central line, foley catheter or a ventilator. Using the new system helps relieve a tedious burden on patient care staff who previously collected device days manually. With the new electronic system, Infection Prevention and Control was able to collect both device days and patient names for surveillance with improved accuracy.

The electronic surveillance software provides appropriate real-time alerts of potential unit specific infections. The software capabilities continue to be explored and utilized with routine conference calls to consultant. The use of the electronic surveillance system has improved surveillance processes by decreasing and in some cases eliminating the need for alternate and manual surveillance methods.
Sustainability.
Infection Prevention and Control continues to work with Information-Systems making any necessary updates. Additionally Infection Preventionists continue to collaborate with Clinical Consultant and attend any related educational seminars.

Role of Collaboration and Leadership.
Infection Prevention and Control and Information Systems.
Infection Prevention and Clinical Consultant, SafetySurveillor TM

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