

Riverside Regional Medical Center

A Facility "NIPs" MRSA Healthcare-Associated Infections via Presumptive Isolation

Soarian® Clinicals

Challenge

According to the Association for Professionals in Infection Control and Epidemiology (APIC) white paper published in 2007, *"Dispelling the Myths: The True Cost of Healthcare-Associated Infections,"* healthcare-associated infections (HAIs) accounted for an estimated 100,000 deaths at a cost of \$5-6 billion annually. With the public reporting of HAIs on the rise, patients will seek those institutions with the lowest infection rates. Prior to the Soarian Clinicals implementation and related capabilities, Riverside Regional Medical Center (RRMC) had no effective and reliable measurement tool to locate or track the impact that isolation measures had upon HAIs within the organization. Without reliable baseline data and accurate reporting, measurement of successful results from practice change would be impossible.

Solution

Accessing and analyzing information on HAIs from Soarian Clinicals documentation using Soarian Clinicals' embedded analytics, RRMC used a "layered approach" to locating and tracking isolations with the following measures:

- Developed a personalized data-mining tool for retrieving and analyzing infection information from selected fields in the nursing documentation stored in Soarian Clinicals. This tool, developed at RRMC, was dubbed NIP-IT, for Nosocomial Infection Prevention through Information Technology. NIP-IT was created in July 2008 to coincide with the need for reporting accurate central line device data to the National Healthcare Safety Network (NHSN) database.
- Revised isolation assessment documentation to gather information on specific types of conditions and precautions, including presumptive isolation (implemented 10/23/08).

- Enhanced the nursing admission database with the capability to target specific isolation-triggering conditions (implemented 4/29/09).
- Enhanced notification to the appropriate staff by placing a biohazard symbol next to patient name when the isolation order is entered into Soarian Clinicals. The biohazard symbol indicates the type of isolation applied for the patient when the user "hovers" the cursor over the symbol (implemented 6/30/09).
- Used answers to nursing admission questions as the basis for a "presumptive isolation" order to reduce time to isolation and the potential for horizontal transmission of infection (implemented 1/20/2010).

Outcomes

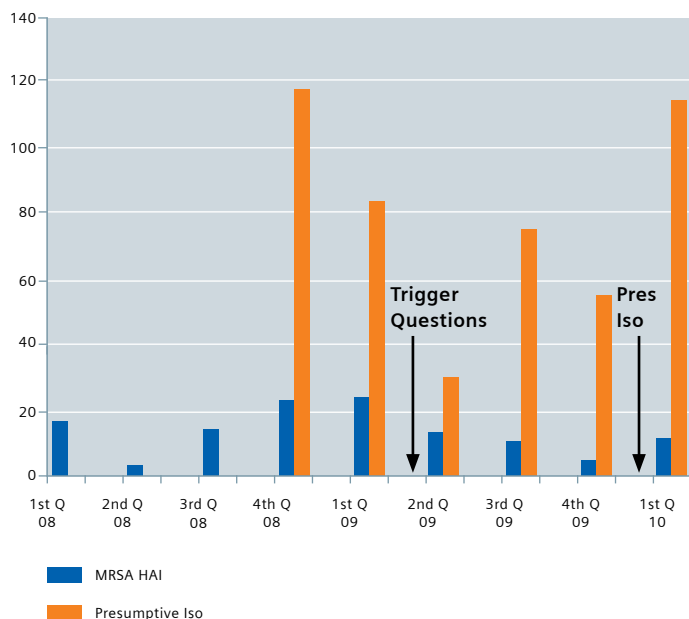
- Reduction in total MRSA HAIs from 2008-2009 from 57 to 53, representing a 7% decrease in the first year of use.
- Although Q1 2010 saw an increase in MRSA HAI patients, there were zero MRSA HAIs for the entire facility in March 2010, which was also the month during which the highest number of presumptive isolations were documented.
- Prior to the implementation of trigger questions asked during patient admission, the MRSA HAI rate appeared to be on the increase. The implementation occurred at the beginning of the Q2 2009 and there has been a steady decrease of MRSA HAIs since then. The trigger for presumptive isolation during the beginning of Q1 2010 appears to have initially increased the number of presumptive isolations, and there also has been an increase in the MRSA HAIs; however, the general number of MRSA HAIs is 43% less than the same time period in 2009 (12 MRSA HAIs Q1 2010 vs. 21 MRSA HAIs Q1 2009).

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Impact of Presumptive Isolation on MRSA HAI



“Reduction of preventable infections is a patient safety priority and the logical and ethical best practice to being a viable and preferred choice to all who are in need of healthcare services. It’s the right thing to do, it’s the best thing to do, and it’s the way our facility will provide care to its patients in the same manner each employee would wish for their own family members to be cared for. Siemens has provided the foundation for a unique data mining program, NIP-IT, and this revolutionary program has been the key to unlock a magnitude of information for the bedside clinicians to help them make timely and informed decisions to prevent infections.”

Patrick Parcells, MD
Senior Vice President and Administrator
Riverside Regional Medical Center

The outcomes achieved by the Siemens customers described herein were achieved in each customer’s unique setting. Since there is no “typical” hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption), there can be no guarantee that others will achieve the same results.

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