Eliminating Central Line Bloodstream Infections in the ICU: A Team Effort

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**Type:** Acute Care Hospital

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**IDENTIFICATION:**

Despite implementation of best practices for central line insertion and management, the ICU experienced an increase in Central Line Associated Bloodstream Infections (CLABSI) during the latter half of 2008.

**PROCESS:**

A multidisciplinary team was formed to examine the problem and identify solutions. The team included members of the ICU nursing staff and leadership; intensivists; infectious disease physicians; infection control; continuing education; purchasing; pharmacy; and general stores. Discussion centered on facilitating the process of central line insertion bundle compliance and ensuring that practice matched protocol.

**SOLUTION:**

A numbers of actions were formulated and implemented:

**Actions:**

- Developed a central line insertion kit with all components needed to comply with the recommended practices for insertion of central lines.
- Reassessed and reeducated staff on the care of central lines.
- Implemented the use of intravenous catheters impregnated with chlorhexidine and silver sulfadiazine.
- Encouraged the avoidance of the femoral site for central line placement and implemented real-time monitoring of femoral lines.
OUTCOMES:

CLABSI rates in the ICU dropped to zero and have remained there for over a year. In addition, the use of femoral lines has decreased and continues to decrease:

ICU Central Line Bloodstream Associated Infection Rates (per 1000 line days)
In addition, the use of femoral lines has decreased over time. We hope to mirror the success of this program by expanding it housewide to all central lines.