

**Decreasing Catheter Related Sepsis in the Neonatal Intensive Care Unit**  
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**Problem:** Nosocomial catheter related infections (CRS) are common occurrences in neonatal intensive care units (NICUs) <sup>(1)</sup>. Our rates for CRS ranged from 7 – 22/1000 catheter days. Benchmarking data revealed that we were higher than other NICUs <sup>(2)</sup>. Since the development of the Peripherally Inserted Central Catheter (PICC) Team 6 years ago, we have implemented many changes in our practice designed to decrease CRS. These changes have only produced short term decreases in CRS.

**Evidence:** In 1998, the Vermont Oxford Network (VON) Evidenced Based Quality Improvement Collaborative for Neonatology published results of their findings related to potentially best practice (PBP) in reducing CRS. These PBPs were chosen based on the quality of evidence found in the literature. As a result of implementing the 8 PBPs, in several NICUs, their rates for CRS dropped from 24.6% to 16.4% <sup>(3,4)</sup>.

**Strategies:** Having already implemented many suggestions from the 8 PBPs over the last 2 years, we focused on 2 areas we thought would make the most impact: reduce line connection bacterial contamination, and decrease duration of central line days.

**Practice changes:** Changes implemented: the method for breaking into lines, decreased frequency of IV tubing changes, replacing ports with tubing changes, utilization of extension tubing with removable ports, new procedure for drawing line cultures, and when possible, limiting catheter dwell time to 2 weeks. The PICC Team designed competencies to address all the issues above, and education related to nosocomial infections was provided to all disciplines.

**Evaluation:** CRS rates were compared with rates prior to practice changes.

**Results:** CRS dropped gradually from 15 to 6/1000 catheter days, and CRS for PICCs dropped from 12 to 2/1000 catheter days.

**Recommendations:** By utilizing the 8 PBPs as a guideline, adjusting our unit specific practices, and providing education and training for all disciplines, we were able decrease our CRS.

**Bibliography:**

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