Reducing Central Line Infection Rate: Creating a Positive Patient Safety Culture in the NICU

St. John Providence Health System, as a Catholic health ministry, is committed to providing spiritually centered, holistic care which sustains and improves the health of individuals in the communities we serve, with special attention to the poor and vulnerable.

Tracy Wanamaker BSN, RN and Sandra Scerri MA, BSN, RNC-NIC, HN-BC

**Objectives**

- To attain and sustain zero central line associated bloodstream infections (CLABSI) in the neonatal population using an interdisciplinary approach
- Utilize evidence-based best practices related to prevention of CLABSI
- Coordinate a staff education plan
- Create a positive patient safety culture

**Staff Education Plan**

- Standardize IV line care & maintenance
  - Central line dressings
  - Scrub the hub
  - Line change protocol
- Comprehensive Unit-based Safety Program (CUSP)
  - Science of Safety education
- Safety Event Occurrence Reporting
- High Reliability training (Healing without Harm)
- 200% Accountability
- Ten Principles of Leadership

**Tools and Techniques**

- Competency checklist for PICC insertion training
- Line maintenance data collection audit
- Root Cause Analysis tool
- Daily central line patient census list
- Blind hand hygiene audits
- Infection control guidelines
- Interdisciplinary patient rounds

**Line Maintenance Audit Tool**

**Methods to Reduce CLABSI Risk**

- Neonatal Infection Prevention Team (NIPT)
- Root Cause Analysis (RCA) performed on all CLABSI & lessons learned shared with team
- Daily rounds: evaluation for PICC removal & transition from IV to oral medications
- Prophylactic IV Fluconazole initiated (VLBW infants)
- Number of days since last CLABSI in staff breakroom & NIPT Tip of the Month
- Pre and post NICU Culture & Beliefs Survey
- The Joint Commission Speak Up™ brochures for families
- Infection Control key messages discussed in shift change NICU safety huddles
- RN completes bedside disinfection every shift (surfaces, equipment, phones, etc.)
- Revised NICU Infection Control Guidelines
- NICU Quality Improvement Interdisciplinary Team

**Conclusion**

- By using an interdisciplinary team approach and applying elements of the CUSP program, a framework of evidence based best practices was established, standardized and implemented e.g. catheter insertion and line maintenance.
- Progress related to the changes was measured and shared.
- The NICU Culture and Beliefs Survey reflects a shift to an environment supportive of patient safety.
- Staff engagement, teamwork, communication are key.
- Therefore with the conscientious effort of the nursing team and embracing a positive culture of patient safety in the NICU setting, CLABSI can be reduced and eliminated.
- On 12/18/2015 we celebrated over three years without a Central Line Associated Blood Stream Infection!

Contact: sandra.scerri@stjohn.org