In 2013, a dedicated group of Neonatal Intensive Care (NICU) nurses began a quest to investigate ways to decrease CLABSI in line unit. In collaboration with medical staff, in April, 2013, twelve NICU RNs attended PICC insertion class, followed by preceptorship under medical team for actual insertions until competency was established. By May 2015, the Pediatrica 3000 Babies Campaign was brought to SIMC by the medical staff.

Utilizing the PDSA methodology in a joint effort to reduce CLABSI in the SIMC NICU, the following steps were taken:  
- Central Line Insertion Bundle  
- Central Line Maintenance Bundle  
- Policies were revised  
- Maximal barrier precautions for central line insertions, including hat and mask for all individuals within 6 feet of the sterile field.  
- Reinforced hand hygiene and scrub the hub.  
- Revised Central Line insertion checklist  
- Daily assessment for need for central line with goal of removal when fluids ≤ 120 mL.  
- Chlorhexidine (2% chlorhexidine gluconate (CHG) and 70% isopropyl alcohol formulation) was introduced for use all procedures (including PICC insertion) with adequate drying time.  
- Chlorohexidine (1.5% chlorhexidine gluconate (CHG) with 70% isopropyl alcohol for all, and connectors to create closed injection system.

In the Fall of 2013, the Pediatrica Group, who had spearheaded the SIMC Neonatal CLABSI PICC team, was replaced by another interventional group of Texas Children’s Hospital. Despite the change in medical coverage, the NICU maintained CLABSI-free for another 21 months due to nursing’s guidance and the team’s commitment to ensuring the practices were kept in line. In June 2015, a line was placed in a position that was not optimal in a patient with difficult IV access after several attempts were made. This led to NICU’s first CLABSI since October, 2011.

The SIMC Safety Committee wasted no time. Immediately, the St. Joseph Medical Center CLABSI Task Force was convened to determine how best to address the failure mode. A chart was drawn up and the team performed a Failure Mode Effect Analysis to discover the reason for the increased CLABSI rate.

In nonfatal cases of CLABSI, an investigation took place for the cause of the CLABSI; if found, re-evaluation on hand hygiene, scrub the hub, during assessment and changes. Also discussed with Medical Directors when central lines left in when needed at ≤120 mL/m2 in absence of need for IV antibiotics. Developed a more dependable system for removal. Postnatal unit has supervised nursing availability at all times. 2011 brought the implementation of donor breast milk (DBM) at NICU which was first introduced in NICU 2009. All neonates over 1,500 grams whose mothers could not or chose not to provide breast milk, allowing for better nutrition and growth and advancement; therefore, earlier achievement of full feeds with subsequent earlier removal of central lines.

In the past, the NICU has maintained many great nurses, but with the changes the were plotted in adult ICU to roll out house-wide wide. CLABSI rounds every shift, sharing data with staff... data driven greater compliance due to increased staff awareness and just in time education. Central line dressing change and color change to white. 

Type of central line dressing was changed within the first two weeks of the test phase. In September, there were 2 unchallenged dressing changes, while in November that number dropped by almost 50%. 

Short line, significant increase in compliance of the central line maintenance bundle has proved to be making positive changes in the CLABSI rates of ICU.

**NONATAL CLABSI: The Yellow Brick Road to “ZERO”**

**St. Joseph Medical Center – Houston**

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**HISTORY**

In 2011, St. Joseph Medical Center marked its 238th birthday. There was a time when approximately one in three Houstonians was born at St. Joseph Medical Center. The hospital has documented five crises with three of them being natural disasters born there. Maternity facilities have been a cornerstone of the community’s sophistication as medical facilities since 1936, although babies were born at St. Joseph Infirmary in 1887, the institution’s first year. As early as 1943, St. Joseph established Houston’s first premature nursery, and was the first hospital to utilize an incubator.

**OBJECTIVES**

- Identify common components of insertion bundles used for central lines in neonates
- List three care processes with proven efficacy in decreasing CLABSI
- Distinguish two avenues beyond the insertion and maintenance bundles that have proven success in reducing and maintaining CLABSI incidence rates

**CLABS AND NEONATES**

Central Line Associated Blood Stream Infections (CLABSI) cause substantial mortality and morbidity in neonates. CLABSI’s are the most common hospital-acquired infection in NICUs. A CLABSI increases patient morbidity and length of stay, it quickly drives up hospital costs. The National Healthcare Safety Network (NHSN) definition of a healthcare-associated infection (HAI) is a localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin(s) that was not present on admission to the acute care facility.