

Using the model for improvement and evidenced-based interventions, this QI project has been associated with reduction in the CLABSI rate by 89%, and over 430 CLABSIs likely have been avoided” Shepherd et al (2015).

Reference:

Shepherd, E.G., Kelly, T.J., Vinsel, J.A., Cunningham, D.J., Keels, E., Beauseau, W. and McClead, R.E. Jr. (2015) Significant Reduction of Central-Line Associated Bloodstream Infections in a Network of Diverse Neonatal Nurseries. The Journal of Pediatrics. April 24th.

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Abstract:

**OBJECTIVE:** To describe a quality improvement (QI) initiative that was associated with a dramatic reduction in neonatal central-line associated bloodstream infection (CLABSI) rate in a diverse group of 8 intensive care nurseries (Neonatal Services).

**STUDY DESIGN:** A quasi-experimental time series QI initiative using the model for improvement and evidenced-based interventions.

**RESULTS:** The aggregate CLABSI rate for Nationwide Children’s Hospital-associated Neonatal Services decreased from 6.0 CLABSI per 1000 catheter days to 1.43 CLABSI per 1000 catheter days in less than 2 years and has remained in control at 0.68 per 1000 catheter days for over 5 years. Each of 8 nurseries has had a 1 year or more CLABSI-free period, including the neonatal intensive care unit with the largest patient volume, acuity, and central line usage. Aggregate Neonatal Services has experienced 3 CLABSI-free quarters since 2007. Key success factors included: (1) engagement of senior executive leadership; (2) bedside “huddles” among clinical and epidemiology staffs conducted within 72 hours after a positive blood culture; (3) implementation of chlorhexidine antiseptics and the use of chlorhexidine-impregnated catheter site discs; and (4) establishment of a dedicated team for percutaneously inserted central catheter insertion to serve units in which central lines are placed less frequently.

**CONCLUSIONS:** Using the model for improvement and evidenced-based interventions, this



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