

**This study demonstrates a >50% reduction in BSI in extremely premature neonates from D3 to 35 following a collaborative quality improvement project to reduce neonatal infection across an NICU network, supported by timely provision of data” Bowen et al (2016).**

Abstract:

**OBJECTIVE:** To decrease the incidence of bloodstream infection (BSI) for neonates

**DESIGN:** Commencing in September 2011, eight neonatal intensive care units (NICUs) in New South Wales and Australian Capital Territory, Australia participated in the Sepsis Prevention in NICUs Group project, a multicentre quality improvement initiative to reduce neonatal infection through implementation of potentially better practices and development of teaching resources. Data were collected for neonates <29 weeks gestation from D3 to 35, using point of care data entry, for BSI, central line-associated BSI (CLABSI) and antibiotic use. Exponentially weighted moving average data trend lines for rates of BSI, CLABSI and antibiotic use for each NICU were automatically generated and composite charts were provided each month to participating NICUs.

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**RESULTS:** Between January 2012 and December 2014, data were collected from D3 to 35 for 1075 neonates 48 h, for a total of 33 933 bed days and 14 447 central line days. There was a significant decrease from 2012 to 2014 in BSI/1000 bed days ( $7.8 \pm 3.0$  vs  $3.8 \pm 1.1$ ,  $p=0.000$ ), CLABSI/1000 bed days ( $4.6 \pm 2.1$  vs  $2.1 \pm 0.8$ ,  $p=0.003$ ), CLABSI/1000 central line days ( $9.9 \pm 4.3$  vs  $5.4 \pm 1.7$ ,  $p=0.012$ ) and antibiotic days/100 bed days ( $31.1 \pm 4.3$  vs  $25.5 \pm 4.2$ ,  $p=0.046$ ).

**CONCLUSIONS:** This study demonstrates a >50% reduction in BSI in extremely premature neonates from D3 to 35 following a collaborative quality improvement project to reduce neonatal infection across an NICU network, supported by timely provision of data.

Reference:

Bowen, J.R., Callander, I., Richards, R. and Lindrea, K.B. (2016) Decreasing infection in neonatal intensive care units through quality improvement. Archives of Disease in Childhood. May 2nd. .

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