

Central line infection prevention bundles reduce number of deadly infections in newborns

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Infection prevention bundles, a package of evidence-based guidelines implemented in unison, are effective for reducing central line-associated blood stream infections (CLABSI) in critical care newborn infants, according to a new study published today in *Infection Control & Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America. The bundle helped reduce the number of lines placed, the duration of time used and the number of infections.

"Infections can impact both short and long term outcomes of fragile newborns, so reducing healthcare-associated infections is a priority," said Rowena McMullan, FRACP, lead author of the study. "The results from this research prove that using evidence-based practices including central line [infection](#) prevention bundles can make a difference in the safety and wellbeing of newborn infants."

The retrospective cohort analysis compared data on infants cared for in the Royal Prince Alfred Hospital Neonatal Intensive Care Unit (NICU) during a baseline period, as well as after the [intervention](#) was implemented. The bundle of interventions included a structured education program that used interactive problem-focused learning during three workshop sessions for all new and current staff at the hospital, as well as specified policies for preparing to handle lines, and techniques for inserting and maintaining lines.

The researchers found that CLABSI rates from central line use dropped during the intervention period compared to the baseline period (3 infections vs. 20 infections). Additionally, they found significantly fewer central lines inserted during this time, compared to the baseline period (260 vs. 353), as well as shorter duration for central lines (4.4 days vs. 5.0 days).

The researchers have noted that the effects of the intervention have gone beyond the intervention period to create a culture of safety in the NICU. "The staff who take care of our patients are the most important resource that we have," said McMullan. "Their ongoing education creates involvement in, ownership of and advocacy for the bundle. We believe this initiated the success of the intervention, but also helped disseminate the changes to other staff and to parents, shifting the whole culture of the unit."

The researchers hope that other hospitals will use the results from this research to support implementation of evidence-based guidelines to prevent CLABSIs in NICUs to help save even more infants from life-threatening infections.

More information: Rowena McMullan et al, Impact of a Central Line Infection Prevention Bundle in Newborn Infants, *Infection Control & Hospital Epidemiology* (2016). [DOI: 10.1017/ice.2016.127](https://doi.org/10.1017/ice.2016.127)

Provided by Society for Healthcare Epidemiology of America

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