

Although research has shown frequent, scheduled dressing changes using the chlorhexidine patch decreases infection rates, the risk of dislodgement and skin breakdown for NICU infants outweighs the potential benefit of decreased infection” Short (2018).

Abstract:

BACKGROUND: Infants in the newborn intensive care unit (NICU) often receive medications or nutritional support for extended periods. Due to the fragility of veins, central lines are often used. Adverse outcomes from central lines such as infections and line dislodgements, where the line terminates in a peripheral vessel rather than centrally, can drastically increase infant morbidity and mortality. Although evidence exists addressing the specialized needs of premature or smaller infants, there is far less evidence regarding infants that are larger, more physiologically complex, and have longer stays.

PURPOSE: Using evidence-based practice strategies, we examined the literature for central line maintenance practices specific to the NICU population and created a care maintenance bundle to reduce infection and line dislodgement rates. Furthermore, we examined implementation of this bundle.

METHODS/SEARCH STRATEGY: A systematic search of PubMed, Cochrane Library, and CINAHL provided evidence for a practice change for central line maintenance for our nontunneled central lines. During project implementation, infection and dislodgement rates for both tunneled and nontunneled lines were examined in order to have a control and intervention group.

FINDINGS/RESULTS: Prior to central line maintenance bundle implementation, there were 19 total incidences of central line dislodgements and 5 central line infections (14 dislodgements and 4 infections were from nontunneled lines, 5 dislodgements and 1 infection from a tunneled line). Postintervention there were 1 total dislodgement and 4 central line infections (the dislodgement was from a nontunneled line and all infections were from tunneled lines).

IMPLICATIONS FOR PRACTICE: Although research has shown frequent, scheduled dressing changes using the chlorhexidine patch decreases infection rates, the risk of dislodgement

and skin breakdown for NICU infants outweighs the potential benefit of decreased infection.

IMPLICATIONS FOR RESEARCH: Further research is needed to determine whether this central line maintenance bundle would be beneficial for tunneled central lines.

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Reference:

Short, K.L. (2018) Implementation of a Central Line Maintenance Bundle for Dislodgement and Infection Prevention in the NICU. *Advances in Neonatal Care*. October 31st. .

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