



To evaluate the impact of a dedicated nursing team on central line insertion success and catheter-related complications” Levit et al (2019).

Abstract:

Aim: To evaluate the impact of a dedicated nursing team on central line insertion success and catheter-related complications.

Methods: Five nurses were trained in central line insertion and maintenance practices and replaced a team primarily comprised of neonatal-perinatal medicine fellows. A prospective observational cohort study with pre/post-intervention analysis was designed to compare certain aspects of central line insertion and related complications between the two models.

Results: Six hundred and twenty peripherally inserted central catheters were attempted preintervention (period 1) in 325 infants, and 630 were attempted in 406 infants postintervention (period 2). Successful central line placement on the first attempt increased significantly from 56.6% in period 1–71.4% in period 2 ( $p < .001$ ), and needle sticks per attempt decreased (3.5 versus 3;  $p = .03$ ). All central line-related complications decreased from 12.8 per 1000 line days in period 1 to 5.5 in period 2 (rate ratio = 0.40; 95% confidence interval: 0.29, 0.65). The most significant reduction was noted in phlebitis (4.9–0.5 per 1000 line days; rate ratio = 0.10; 95% confidence interval: 0.03, 0.30) Conclusion: Implementation of a dedicated nursing-based central line team, skilled in insertion and

certain aspects of catheter maintenance, significantly improved insertion rates and reduced line-related complications.

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### Reference:

Levit, O., Shabanova, V. and Bizzarro, M. (2019) Impact of a dedicated nursing team on central line-related complications in neonatal intensive care unit. *The Journal of Maternal-Fetal & Neonatal Medicine*. January 7th. .

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