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Compliance to guidelines for prevention of central line infections in neonatal intensive care units in Belgium

Statement of the Problem: Neonatal Intensive Care Unit patients are at high risk for central line associated bloodstream infections (CLABSI). International guidelines, based on evidence based recommendations for the prevention of CLABSI, have been published. However, the guidelines are largely based on adult studies. Great variability in CLABSI infection rates among NICUs have been reported, probably because of differences in adherence to CLABSI prevention guidelines. The purpose of this study is to describe the variability of current prevention practices among Belgian NICUs and to identify areas for improvement and for further research.

Methodology & Theoretical Orientation: We surveyed NICU staff reporting to the National healthcare associated infection working group (NeoKISS) to assess strategies used to prevent CLABSI and also hygiene quality audit performance the NICUs. Each item was scored in accordance to the level of evidence of the 3 reference guidelines (SHEA/ EPIC3/ CDC).

Findings: Fourteen (73%) out of 19 NICUs did respond to the survey. The compliance to the CLABSI prevention items were 64%, 47% and 50% for the insertion items, maintenance items and hygiene quality items respectively. The variability between units was considerably with a SD of 8, 13 and 22 for insertion items, maintenance items and hygiene quality items.

Conclusion & Significance: The overall compliance to international guidelines for the prevention of CLABSI is low (57%) in Belgium. Especially, during maintenance of the central line there is room for improvement in infection prevention. Our survey underscores the need for standardization of central line care in Belgium and was able to define priorities for education.

Biography

Ludo Mahieu has his expertise in epidemiology and passion for clinical infectious diseases, hospital hygiene and wellbeing of the newborn. His open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. He has built predictive scores after years of experience in research, neonatology, teaching both in hospital and education institutions. The prediction is based on computer based weighting using multivariate analysis and more recently machinery learning which is a ethodology that utilizes artificial intelligence for evaluation: measurement, description and judgment. It allows for complex prediction.

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