

Peripheral Intravenous Canula (PIVC) Assessment Skills Among Pediatric Nurses: Audit-based Approach Study

Deena C T^{1*}, Li Tsu Chong¹, Drina Dalie², Rose A Nain¹, Renie M Joanes¹, CheristyTumbil²

¹ Department of Nursing, Faculty of Medicine and Health Sciences, UMS Road, 88450, Kota Kinabalu, Universiti Malaysia Sabah, Sabah, Malaysia

² Sabah Women and Children Hospital, Ministry of Health Malaysia, Kota Kinabalu, Sabah, Malaysia

*Corresponding author: dnaclare@ums.edu.my

ABSTRACT

Introduction: Peripheral Intravenous Cannula (PIVC) placement can cause undesirable effects, such as phlebitis. Poor PIVC care can irritate tunica intima layers of the superficial vein. The incidence of phlebitis had become a national nursing indicator, with a standard of less than 0.9%. The standard care of the patient with intravenous includes a routine PIVC assessment. However, what the assessment should be based on remained unclear. The objective of this study is to assess nurses' skill in performing PIVC assessment. **Methods:** This is a descriptive study using an audit-based approach. It is conducted in a pediatric hospital. Nine pediatric wards were identified via stratified sampling methods. A total of 86 registered nurses consented to participate in this study. A validated research instruments ($\alpha = 0.83$), PIVC Assessment Skill (PIVC-AS) checklist is used to audit nurses in performing PIVC assessment. PIVC-AS consists of nine audit criteria (AC), AC1: communication skill, AC2 until AC7: PIVC assessment skill, AC8: documentation skill and AC9: PIVC management. **Results:** Nurses communication skills to patient as in AC1 shows compliance rate of seventy six percent. The compliance rate can be explained that this study was done in the pediatric setting. Participants may skip this communication due to handling with a pediatric patient. More than eighty eight percent nurses comply with AC2 to AC6 which indicated their excellent skill in performing PIVC assessment every shift. However, in the AC7, only sixty seven percent comply to palpate PIVC area for any evidence of venous cord and warmth. **Conclusion:** This study concludes that communication between nurses and pediatric patients prior to PIVC assessment often missed out by nurses. The palpation techniques also not been carried out as compared to observation technique in pediatrics setting. Palpation technique is crucial to detect 'warmth to touch' because it differentiates between the early and medium stage of phlebitis.

Keywords: Peripheral Intravenous Cannula (PIVC), Phlebitis Assessment, Thrombophlebitis, Nursing audit, nurses skills