

## PERIPHERALLY INSERTED CENTRAL CATHETER RELATED COMPLICATIONS IN THAI PEDIATRIC PATIENTS.

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**Introduction:** The use of Peripherally Inserted Central Catheters (PICCs) has been increasing globally since 1976; however, the adoption of PICCs in Thailand has been initiated less than a decade ago. The objective of this study is to evaluate the prevalence of complications of PICC line in Thai pediatric patients. The study will focus on the identification of complications prevalence and risks related to PICCs used in hospital-based and discharge-to-home patients.

**Materials and Methods:** We retrospectively reviewed pediatric patients with PICC line insertion by in-training pediatric pulmonology and critical care fellows to assess the prevalence of complications and their risk factors for 2 years in a tertiary referral center. Moreover, we compare the complications between hospital-based patients and discharge-to-home patients.

**Results:** A total of 200 PICCs were inserted in 176 children. Total catheter day was 7,817 (4,657 for Hospital-based and 3,160 for discharge-to-home patients). The overall complications were 6 per 1,000 catheter day. The most common complications were occlusion and CRBSI with 1.6 per 1,000 catheter day. The discharge-to-home patients have longer PICC dwell time (61.9 days,  $p$  value  $< 0.001$ ) and less complications compared to hospital-based patients ( $p$  value = 0.008). Smaller catheter was associated with occlusion ( $p$ -value 0.033). The repeated PICC insertion was related with more complications ( $p$ -value =  $<0.0001$ ).

**Conclusion:** From our study, larger size PICC catheter will result in less complication. Other risk factor to modify the complications has not been found. The Ambulatory-based PICC is possible. A thorough maintenance, care plan and care team of PICC should be initiated for ambulatory options.

**Keywords:** PICC-related complications, pediatric