

Peripheral intravenous catheter insertion is a clinical procedure commonly performed by nurses for pediatric patients in Bhutan. This study describes peripheral intravenous catheter first attempt success and factors associated with such insertions” Choden et al (2018).

Abstract:

**INTRODUCTION:** Peripheral intravenous catheter insertion is a clinical procedure commonly performed by nurses for pediatric patients in Bhutan. This study describes peripheral intravenous catheter first attempt success and factors associated with such insertions.

**METHODS:** A cross-sectional survey was conducted from October 2016 to March 2017, comprised of a national sample of the Bhutan pediatric patient population (0-12 years). We collected data on peripheral intravenous catheter first time insertion success rate of admitted pediatric patients, to identify predictors of a successful first time attempt. Clustered log binomial generalized linear models were used to obtain the prevalence of first time attempt success and predictors of success.

**RESULTS:** The prevalence rate of successful first time attempt adjusted for clustering was 64% (95% confidence interval: 51%-80%). Predictors of a successful first time attempt were older patient age, lighter skin color, the vein being visible with a tourniquet, and the left hand being used for insertion. A transilluminator was used in 52 patients, and the peripheral intravenous catheter was eventually successfully placed in 82% of the patients.

**DISCUSSION:** Our first time successful cannulation rate is substantially lower than that found in similar studies in other countries. Considering the impact a peripheral intravenous catheter has on patients’ clinical outcomes and cost implications, reducing the number of failed attempts should be of high importance. Better education and simulation, combined with the adoption of vessel locating technology, are required to improve insertion practice in Bhutan. This could lead to greater efficiency of the health facilities in Bhutan.

Reference:

Choden, J., Carr, P.J., Brock, A.R. and Esterman, A. (2018) Nurse performed peripheral intravenous catheter first time insertion success in pediatric patients in Bhutan: An observational study. *The Journal of Vascular Access*. August 15th. .

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