



**Service Priorities and Programmes**  
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**Sustainable and positive impact of clinical pharmacists in educating pediatric nurses about medication safety in an acute hospital**

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**Introduction**

Medication errors are the most common type of medical error and children are particularly vulnerable to serious drug events. With frequent turnover of paediatric nurses, it is important to uphold nurses' medical safety awareness to safeguard patient care. An educational program was designed to enhance nurses' knowledge on medication safety.

**Objectives**

The objective of this study was to investigate the effectiveness and sustainability of a medication safety program delivered by pediatric clinical pharmacist to nurses working in pediatric ward in Tseung Kwan O Hospital.

**Methodology**

Contents of the educational program was designed and prepared by the Pharmacy Paediatric Service Working Group after reviewing the medications incidents and near misses in paediatric wards in Hospital Authority hospitals between June 2012 to June 2015. Topics selected for the program included dosage calculations, handling of concentrated electrolytes, intravenous drugs and fluids compatibility, look-alike sound-alike medications and safe use of abbreviations. The program consists of two interactive presentations delivered by paediatric clinical pharmacists in March and April 2017. Nursing knowledge on the topics was measured and compared using same assessment test before, immediately after and 6 months after the presentations. Wilcoxon Signed-Ranks Test ( $P \leq 0.05$ ) was used to analyze paired data. Nurses also completed a satisfaction survey with a Likert Scale of 1 to 6 (1 = strongly disagree to 6 = strongly agree) at the end of each presentation.

**Result**

A total of 19 (86%) and 17 (77%) nurses participated in Part 1 and Part 2 of the program. Results showed 100% of nurses had improvement after the presentations.

Comparing with baseline, nurses' knowledge improved significantly immediately after and sustained 6 months after both presentations: Part 1 (mean 66% vs 79% and 80%,  $p < 0.001$ ), Part 2 (mean 76% vs 92% and 91%,  $p < 0.002$ ) The responses of the participants were overwhelmingly favorable. 97% of respondents gave a score  $\geq 5$  for overall satisfaction. Over 97% respondents agreed the program was useful and would recommended to others. This study showed that the impact of the program was positive and was sustainable for at least 6 months. Collaboration between nurses and pediatric clinical pharmacists and periodic provision of similar educational program to enhances nurses medication safety knowledge is desirable.