



## Service Priorities and Programmes Electronic Presentations

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### **Evaluation of the clinical pharmacy service in Neonatal and Paediatric intensive care settings at Prince of Wales Hospital**

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#### **Introduction**

Clinical pharmacy service in the Neonatal and Paediatric Intensive Care Units (NICU and PICU) has been started with the aims to optimise quality use of drugs and enhance medication safety in Prince of Wales Hospital since April 2011. Clinical pharmacist reviews each medication order of individual patient for appropriateness with bedside clinical data. Structured labels are also prepared on patient's medication administration records by pharmacist to facilitate accurate drug reconstitution and administration by nurses. The identified drug related issues are communicated to the responsible physicians for appropriate follow-up.

#### **Objectives**

To evaluate the effectiveness of the clinical pharmacy service in Neonatal and Paediatric Intensive Care Units for service development.

#### **Methodology**

This is a retrospective review of the clinical interventions performed by clinical pharmacists in NICU and PICU from 1 April 2011 to 31 March 2013. The classification system of the Pharmaceutical Care Network Europe Foundation (PCNE, version 6.2) was adopted in the data analysis.

#### **Result**

A total of 279 clinical recommendations or interventions have been performed by pharmacist. Two-third (66%) of the cases involved drug dose selection. Common examples included adjustment for patient's impaired renal and liver functions especially for various antibiotic, antiviral, and antifungal agents; titration following sub-therapeutic drug levels as well as increment to account for the increase in patient's body weight. Drug administration issues involving clinical documentation of drug administration schedule by nursing colleague and doctor's prescribing frequency on patient's medication administration records were identified in 28% of the cases. There were 125 drug information enquiries raised by the healthcare team. Common

discussions include therapeutic agent selection, drug reconstitution and administration method, dosage recommendation, formulation stability as well as compatibility issues. The acceptance rate of the clinical recommendations by physicians was over 70% (72%). Roles of clinical pharmacists in preventing and rectifying drug related issues in the Neonatal and Paediatric Intensive Care Units have been demonstrated. This service is important in enhancing the medication safety and quality of patient care especially in the busy high-risk in-patient settings.