



**Service Priorities and Programmes**  
**Electronic Presentations**

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**Submitting author:** Dr Osburga Pik Kei CHAN

**Post title:** Associate Consultant, Queen Elizabeth Hospital, KCC

**A quality improvement project to improve medication safety in patients with known drug allergy alert in Intensive Care Unit**

*Chan PKO, Lam CL, Leung PWR*

*Intensive Care Unit, Queen Elizabeth Hospital*

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**Introduction**

Clinical Information System (CIS) is a computer-based information management system and has been implemented in ICU for documentation and storage of patients' clinical data. CIS has also been used for medication prescription and administration in ICU. The procedure of medication prescription and administration using CIS is different from that using paper-based Medication Administration Record (MAR). As CIS had replaced paper-based MAR in ICU, the hospital-wide practice on known drug allergy alert, designed for paper-based MAR, could not be effectively applied to the setting with the use of CIS in ICU.

**Objectives**

To improve medication safety in patients with known drug allergy alert using CIS in ICU

**Methodology**

A quality improvement project was implemented in October 2011. 1) Guideline on proper practice of medication prescription and administration using CIS in patients with known drug allergy alert was formulated and promulgated to all ICU staff. 2) Educational sessions were given to all ICU staff to reinforce the compliance to proper practice of medication prescription and administration, such as checking for allergy history on Clinical Management System and the "Red Dot" on patients' bracelet before medication prescription and administration. 3) Red alert signage was placed on the top of the monitor of CIS and at the head of bed of patients with known drug allergy alert to enhance alertness of staff. 4) The format of putting alert divider in patient folder in ICU was standardized such that the alert sheet for known drug allergy alert was put on the first top page for easy reference. 5) Drug allergy reference charts were posted at different locations of the unit, including the bedside trolley of patient for easy reference during medication administration. 6) The number of antibiotic kept as top-up medication in the top-up medication cupboard was reduced to only one such that pharmacy can serve as a gatekeeper against adverse drug events with known allergy or cross-sensitivity to antibiotics in patients.

**Result**

No adverse incident of giving inappropriate medication to patients with known drug allergy alert had occurred since October 2011. Alertness of ICU staff for patients with known drug allergy alert during medication prescription and administration had been enhanced.