



**Service Priorities and Programmes**  
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**Impact of changing printing sequences of unit dose packs on pharmacy and nursing practice - A before and after time and motion study**

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Efficiency & Safety of Medication Dispensing

Efficiency of Safety of Medication Administration

**Introduction**

Unit dose pack packing and inspection machines are recently employed in local public hospitals. While medication errors were reduced, full utilization might further improve working efficiency. The proposed way is to change the printing sequence of the rolls of unit dose packs according to the administration sequence in ward.

**Objectives**

This study investigated the above impact on time used by the pharmacy department and nursing staffs in a medical ward as well as medication safety issues.

**Methodology**

A time and motion study was conducted. The medication refill process in pharmacy was broken down into different motions and medication administration time by nurse were timed on Sep 2016 and Mar 2017. Wilcoxon Signed Rank test were used. A satisfaction survey of nursing staffs was conducted. Number of medications incidents and ward return were also counted in different time frame.

**Result**

P-value>0.05 in the change in total time used by dispenser (19:30 vs 17:30) and pharmacist (14:24 vs 15:05), while p-value<0.05 in drug administration in ward (1:49:19 vs 1:13:43). 16 satisfaction surveys were returned. No medications incident was reported on Apr 2016-Apr 2017 but nurses subjectively agree that they are more likely to find the correct medications for the correct patients. Number of ward return has been increased, subjected to confounding factors.