



Service Priorities and Programmes
Electronic Presentations

Convention ID: 694

Submitting author: Mr Si To HO

Post title: Resident Pharmacist, Tseung Kwan O Hospital

A Study on Impact of Time with the use of Automatic Tablet Dispensing and Packaging System in In-patient setting at a local Hospital

Ho ST(1), Chan WL(2)

(1)Pharmacy Department, Tseung Kwan O Hospital (2)Department of Pharmacology and Pharmacy, The University of Hong Kong

Keywords:

IPMOE

ATDPS

Time motion study

Inpatient dispensing

Automation

Introduction

Since the implementation of IPMOE in TKOH, inpatient dispensing workflow had been smoothen out by reducing unnecessary paperwork. Urgent medication order can be handled efficiently. In order to optimise the benefit of IPMOE and further automatise workflow, an automatic tablet dispensing and packaging system (ATDPS) machine was installed in TKOH.

Objectives

To investigate the impact on time with the use of ATDPS machine for dispensing in inpatient setting.

Methodology

Time and motion study was carried out to assess time spent on various dispensing procedure during daily drug refill. Time taken to complete drug refill with and without the use of ATDPS was measured and compared.

Result

Time spent to complete drug refill of a surgical ward was measured for five days, before and after applying ATDPS. The total time spent for refill was similar (31min25sec/31min37sec). However, there was an increase in number of refill items from 28.4 to 74.8 (163% increase), leading to an overall time saving effect. The averaged time to process one item during drug refill was reduced from 49.6seconds to 25.2seconds, resulting 51% reduction. Pharmacy staff can process more than doubled amount of work with the same amount of time. The increase in dispensing items was due to shortened refill duration, revision on ward stock items, and drug refill duration reduction from three-day to one day. It ensured that medicines supplied to wards were most updated. Besides, changes in work activity of pharmacy staff were observed during the study. Supporting staff was shifted from non-inpatient duty to

packing medication before delivery, while one dispenser was shifted from dispensing medication to operating ATDPS.