Medication Management in Operating Theatre

Ong SPC[2] , Chia SN[1] , Chee LL[3] , Rosnah I[2] ,
Lee CHA[3] , Shen HY[2] , Malkit K[2] & Nah SNJ[2]
[1]KK Women's and Children's Hospital, Division of Nursing
[2]KK Women's and Children's Hospital, Major Operating Theatre
[3]KK Women's and Children's Hospital, Day Surgery

KK Women's and Children's Hospital
SingHealth

Singapore Healthcare Management 2015

Introduction

The Anaesthesia Workstation (AWS) is an automated dispensing cabinet designed for anaesthesia providers to keep items securely stored, yet easy to access during surgery. The most significant feature is the use of technology to include light guided drug dispensing drawers, security biometric and password protected access to the AWS.

AWS was introduced in KK Women's & Children's Hospital, Singapore in 2013 and is the first system in Asia.

Objectives

Enhance Patient Safety

Improve Operational Process

Improve Efficiency of Billing & Inventory

Barcode scanning technology was also included to ensure the accuracy of the medication retrieved before administered to the patient. The medication name is displayed clearly on screen. When wrong medication is obtained and scanned, user is alerted both audio and visual immediately. Real-time inventory effectively capture medication used and billed patient automatically.
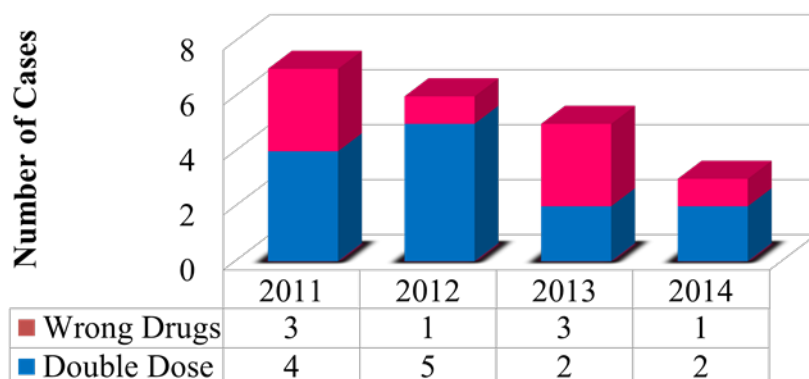
Methodology

A pre and post implementation of AWS medication error data was collected. Data was retrieved from hospital data base via Risk Management System for all medications error that took place in the Operating Theatre from 2011 till 2014.

Results

Medication Errors in OT

	2011	2012	2013	2014
Wrong Drugs	3	1	3	1
Double Dose	4	5	2	2

The Control Drugs (CD) are kept in AWS under double lock and they are kept individually in single security bin.

Conclusion

Pre-implementation, there were an average of 7 medication errors cases reported annually. After implementation, there was a significant reduction error to about 3 cases of wrong drug/dose related medication error in 2014.

There is a significant reduction in medication error in the Operating Theatre and it enhances the security of medication management system in the Operating Theatre. Most importantly, the system helps to reduce nursing and medical administrative time in billing the patient thus allows more time for patient care.