In-Patient Medication Order Entry (IPMOE) Go-Live: A Risk Assessment Approach in Reducing Medication Errors

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Introduction
North District Hospital was the seventh hospital to implement the Hospital Authority In-Patient Medication Order Entry (IPMOE) system hospital-wide. To help colleagues adapt to an electronic platform and raise awareness of new risk areas, early sharing of possible pitfalls served to heighten colleagues’ interests and vigilance.

Objectives
Review the effectiveness of early post-live run debriefing in reducing potential medication errors during IPMOE implementation

Methodology
IPMOE was rolled out to 17 wards (surgical followed by medical stream) and eight functional units over three months from mid-April to mid-July 2016. Apart from training and MOE simulation in demo environment system, IPMOE transferal drills and pre-live run drills were conducted. Standard preparation checklists and detailed workflow arrangement recommendations were sent to each ward prior to live run. All post-live run debriefing sessions were held in the afternoon of live run days with a focus on pitfall sharing. Stakeholders and users were invited to join so that identified errors could be reported and rectified in a timely manner.
**Result**

Twenty debriefing sessions were held during the implementation phase. Among 426 attendances in the debriefing sessions, 14 were medical staff, 358 nursing staff, 32 pharmacy staff while 20 were IT or staff belonging to other disciplines.

A total of 161 pitfalls or issues (65%, 21%, 67%, 35% and 3% relating to prescribing, dispensing, administering, information technology and facilities/equipment respectively) were identified and discussed. Majority of the issues (86%) were resolved locally through modifying workflow between inpatient units and intervention suites and refining medication administration schedule. Problems with WiFi coverage were promptly rectified and pitfalls of misleading prescription entries were highlighted and shared. Feedback (14.3%) relating to medication information, system errors and IT faults were communicated to Head Office (HO) Chief Pharmacist’s Office (CPO) and HO IT colleagues respectively. Other system enhancement issues (6.2%) were discussed at IPMOE User Resource Group meetings held at HO.

The number of near-miss prescription errors in medical wards in March and April 2017 (pre-IPMOE implementation) was compared with September and October 2017 (post-IPMOE implementation). Total number of near misses was reduced by 24% (from 124 to 94 errors).

Key components to a smooth IPMOE implementation included workflow standardization and creating a platform for timely communication and problem resolution. Early sharing of possible pitfalls and maintaining vigilance to flaws in a novel system led to reduction in near-miss prescription errors.