PHARMACIST MEDICATION INTERVENTIONS - CLOSING THE LOOP

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INTRODUCTION

When pharmacists perform medication interventions, the usual practice is to contact doctors to verbally confirm changes and dispense the amended orders to patients. Pharmacists document the interventions in Sunrise Clinical Manager (SCM) which will alert doctors when intervened orders are re-prescribed. If doctors do not update the order or disregard the SCM alert, prescribing errors can arise.
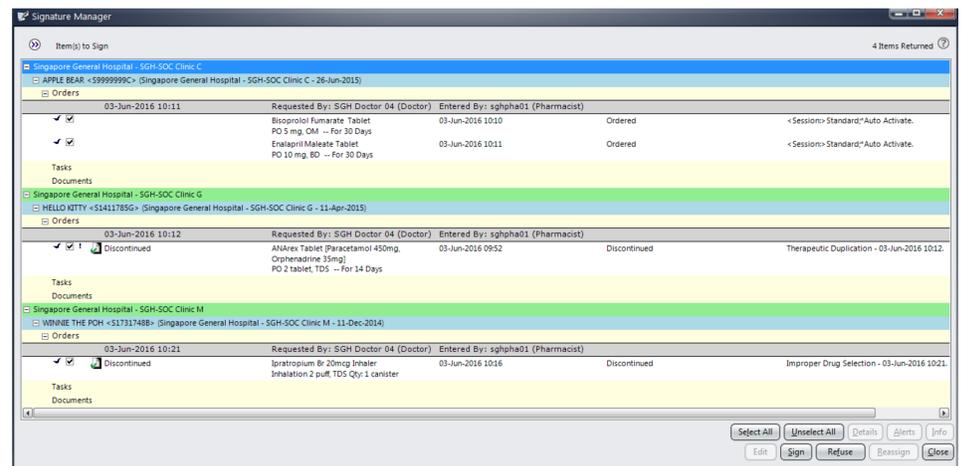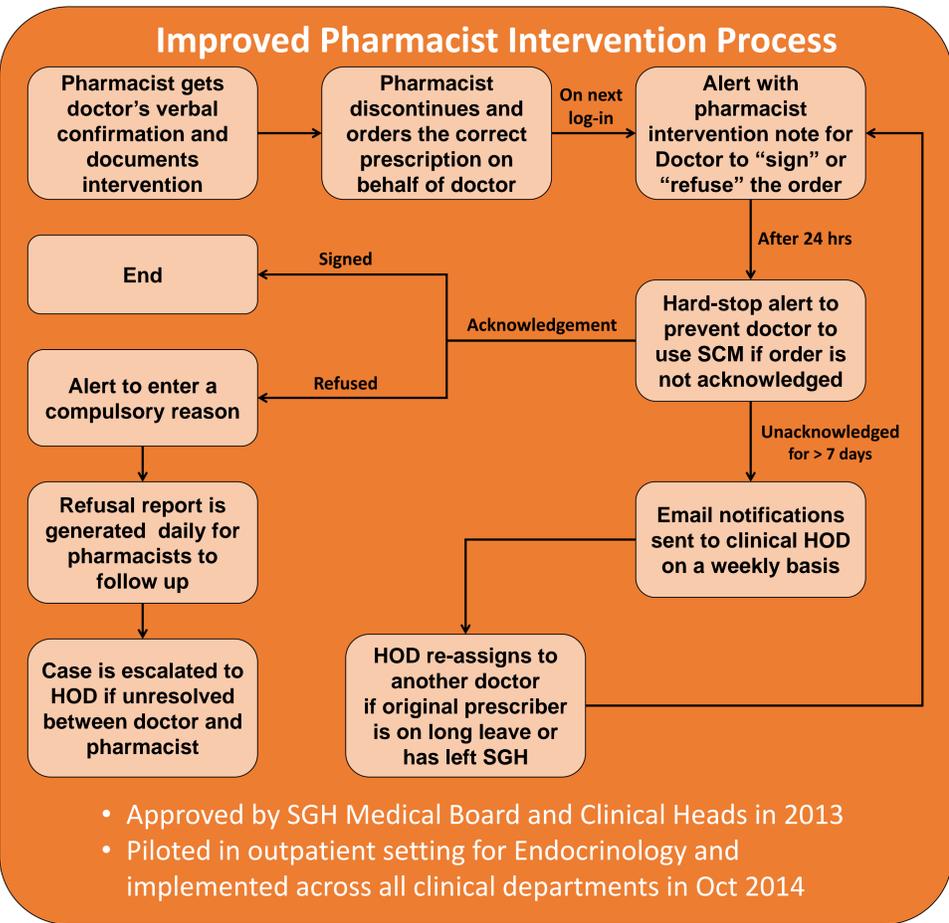
In 2013/2014, five medication errors reached patients due to uncorrected orders.
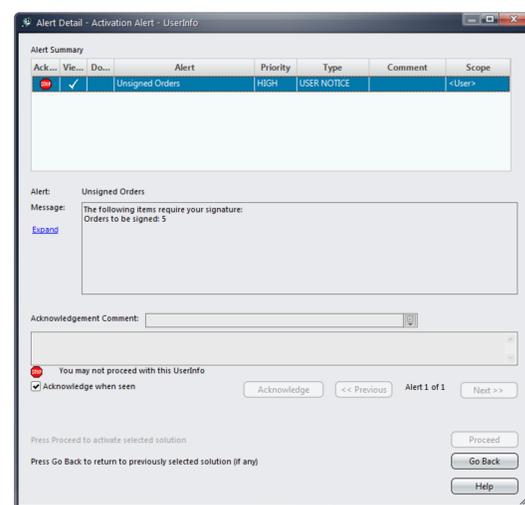
1. Pharmacist contacts doctor for clinical intervention

2. Pharmacist documents intervention in SCM

3. Doctor does not amend order in SCM

4. Doctor ignores intervention alert

5. Error occurs when doctor re-prescribes the original order
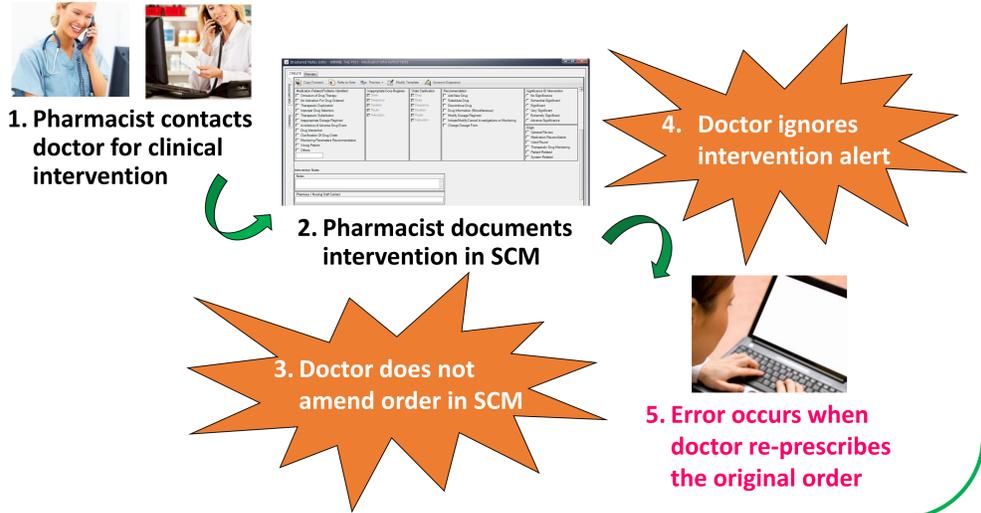
OBJECTIVE - To reduce medication errors due to uncorrected orders after pharmacist interventions.

METHODOLOGY

SGH Medication Safety Committee and SingHealth Medication Core Clinical Design Team developed a workflow process to close the pharmacist intervention loop.

Improved Pharmacist Intervention Process

Pharmacist gets doctor's verbal confirmation and documents intervention

→ Pharmacist discontinues and orders the correct prescription on behalf of doctor

→ On next log-in → Alert with pharmacist intervention note for Doctor to "sign" or "refuse" the order

After 24 hrs → Hard-stop alert to prevent doctor to use SCM if order is not acknowledged

Signed → End

Acknowledgement

Refused → Alert to enter a compulsory reason

Refusal report is generated daily for pharmacists to follow up

Case is escalated to HOD if unresolved between doctor and pharmacist

Unacknowledged for > 7 days → Email notifications sent to clinical HOD on a weekly basis

HOD re-assigns to another doctor if original prescriber is on long leave or has left SGH

- Approved by SGH Medical Board and Clinical Heads in 2013
- Piloted in outpatient setting for Endocrinology and implemented across all clinical departments in Oct 2014

Alert with pharmacist intervention note for Doctor to "sign" or "refuse" the order

Hard-stop alert to prevent doctor to use SCM if order is not acknowledged

RESULTS

Out of 20,824 outpatient pharmacist interventions in 2015:

Orders discontinued by pharmacists	Order on behalf by pharmacists	Acknowledgements refused by doctors
7,931	10,166	18 (0.1%) *

*All refused acknowledgements were resolved after clarifications

GOAL ACHIEVED

Medication errors due to uncorrected orders after pharmacist interventions have dropped to ZERO since full implementation !

CONCLUSION

- This workflow improvement has closed a critical gap in the medication use process, resulting in timely and accurate updates to medication records
- It has allowed compliance with regulatory requirements to furnish a prescription within 24 hours of medication supply following a verbal order
- This simple yet effective solution can be implemented in other healthcare institutions in Singapore