National Quality Improvement Conference

Review of the Outpatient Medication Reconciliation Process

Leow S.M., Soh W.K.

leow.si.min@ktph.com.sg

Yishun Health
National Healthcare Group

Problem Statement

At KTPH Outpatient Pharmacy (OP), pharmacists perform medication reconciliation (MR) before medications are supplied. The MR process ensures accurate and complete medication information transfer during transitions of care, and that any medication changes are intended.

However, MR-related errors constituted a large proportion of medication errors reported.

Project Aim

This project aims to identify common root causes for MR-related errors and propose measures to mitigate identified issues and evaluate outcomes, so as to reduce the number of MR-related errors in OP.

Lessons Learnt

1 Limitations of a retrospective study

As this was a retrospective study, information required for the analysis might not have been clearly presented in the past medication error reports.

✓ More time was taken to scrutinize the reports in greater detail to extract all relevant points.

2 Change is the only constant

Measures implemented may not always remain relevant given that the systems and workflows are always changing.

✓ Continue to monitor trends regularly and utilize similar concepts to improve gaps identified.

Potential Solutions

Phase 1: Retrospective root cause analysis (RCA) of all OP MR-related errors submitted in the Hospital Incident Tracking System (HITS) portal in 2020 was conducted. Root causes were identified and categorised.

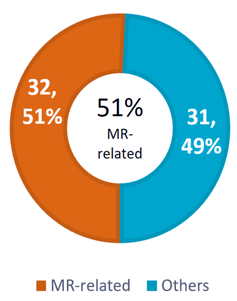
Phase 2: Recommendations targeting common root causes were proposed and implemented by the OP Medication Safety team in 2021 in collaboration with other committees.

Top 3 categories of root causes & the targeted measures

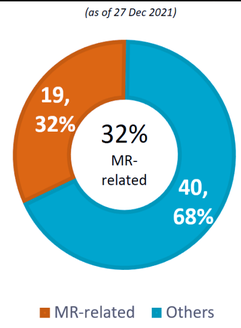
Root causes	Measures implemented
Complex MR (27%): Use of backdated Rx	Increased awareness to reject medication collections from backdated Rx when a new Rx is available
Non-adherence to SWI (24%)	Increased awareness of MR-related errors via sharing in monthly bulletin
Inexplicit MR steps (7%)	Incorporated specific MR steps in Tier 1 Pharmacist training materials

Outcomes & Impacts

2020 OP Medication Errors (N = 63)



2021 OP Medication Errors (N = 59)
(as of 27 Dec 2021)



- **Number of MR-related errors reported reduced** from 32 in 2020 to 19 in 2021.
- **Rate of MR-related errors declined** from 1 in 5573 patients in 2020 to 1 in 10577 patients in 2021 (accounting for OP patient load).

✓ An estimate of 195 hours (13 cases x 5 hours x 3 staff) were saved **(= 0.09 full-time equivalent (FTE) or approx. $7862 a year).**

✓ Reduction in MR-related errors also corresponds to **lower risk of patient harm so as to provide safer care.**

Project Impact

Measures described in this project have been incorporated into day-to-day operations and staff training. These continue to help reduce MR-related errors due to the root causes identified. Moving forward, similar processes can be applied to mitigate rising errors of other nature.