## Project Title

Digitalisation of Pharmacy Dashboard to Improve Data Visualisation

## Project Lead and Members

- Shim YT
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- Loh LL
- Tee SL
- Tan R
- Ngoi ML

## Organisation(s) Involved

St Luke's Hospital

## Healthcare Family Group Involved in this Project

Pharmacy

## Applicable Specialty or Discipline

Pharmacology

## Project Period

Start date: April

Completed date: August

## Aims

Create a real time digital pharmacy dashboard of key performance indicators with aims to:

- Simplify data collection for analysis
- Improve data visualisation for better tracking
- Allow prompt implementation of counter measures if needed

## Background

See poster appended/ below

## Methods

See poster appended/ below

## Results

See poster appended/ below

## Lessons Learnt

See poster appended/ below

## Conclusion

See poster appended/ below

## Additional Information

Accorded the MOH National Quality Improvement Conference 2023 (Outstanding Poster Award)

## Project Category

Technology

Digitalization

## Keywords

Digitalisation Pharmacy Dashboard

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National Quality Improvement Conference

# Digitalisation of Pharmacy Dashboard to Improve Data Visualisation

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St Luke's Hospital

## Problem Statement

St Luke's Hospital (SLH) Pharmacy seeks to provide quality care for our patients and improve medication safety. As such, close calls (CC) and dispensing errors (DE) are tracked as part of risk monitoring measures to ensure good clinical outcomes.

Currently, CC and DE are recorded on hardcopy charts. Collation and computation of statistics is done monthly via manual count of entries for each month. Year-to-date CC and DE rates are also computed manually twice a year.

As this process is tedious, time-consuming, and statistics are not available real time, the team set out to create a digital dashboard.

## Project Aim

Create a real time digital pharmacy dashboard of key performance indicators with aims to:

- ✓ Simplify data collection for analysis
- ✓ Improve data visualisation for better tracking
- ✓ Allow prompt implementation of counter measures if needed

## Lessons Learnt

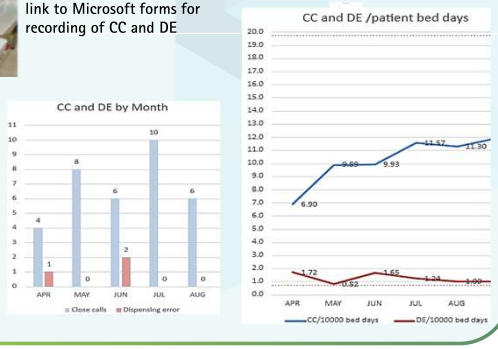
| Challenge | Strategy |
|---|---|
| Starting digital dashboard mid financial year | Communication within the team on when digital dashboard is launched and how the data would be ported over was key to ensure that staff interprets the data correctly. |
| Maintaining data integrity with multiple users | Excel file fields were protected where possible and workbook is backed up regularly. |

## Potential Solutions

- CC and DE are entered via Microsoft forms, accessed through scanning of printed QR code placed in the packing areas where errors are usually detected. (Fig. 1)
- Operational dashboard was created using Excel file to collate and generate relevant charts
- Monthly and year-to-date statistics were computed using preset excel formulas and presented as charts (Fig. 2).

Fig 1: Picture showing placement of QR code with link to Microsoft forms for recording of CC and DE

Fig 2: Screenshots of dashboard displaying CC and DE




## Outcomes & Impacts

- Reporting of CCs and DEs via QR code and Microsoft forms improves time efficiency and avoids risk of transcribing errors.
- Digital dashboard allows staff to customise and display their shared key performance indicators(KPI) in one platform.
- KPIs are now easily visible and are available real time. This allows the team to monitor and review existing pharmacy processes closely to improve medication safety.
- Dashboard has since been modified to include other pharmacy KPIs to better monitor progress.
- From a survey conducted, staff feedback that:


Fig 3: Picture of pharmacy team reviewing KPIs on dashboard during weekly meeting