

Project Title

Use of IT Tool for Alternate Day Med Review to Enhance Pharmacist Work Efficiency

Project Lead and Members

Project lead: Yeo Chay Leng

Project members: Quek Hui Chen, Ng Choy Moon

Organisation(s) Involved

Ng Teng Fong General Hospital

Aims

Harness IT to identify clinically stable inpatients for alternate day medication review on JurongHealth Campus EMR system to reduce time spent on daily medication review by pharmacists by 30 minutes per pharmacist per day. We aim to achieve this in 6 months.

Background

See poster below

Methods

See poster below

Results

See poster below

Lessons Learnt

IT can be harnessed and help focus time and effort on target population groups who need more care, improving operational efficiency. Time saved can be used constructively in other areas such as workflow improvement projects and patient education.

Conclusion

See poster below

Project Category

Care & Process Redesign

Keywords

Ng Teng Fong General Hospital, Quality Improvement, Improvement Tools, Plan Do
Check Act, JurongHealth Campus EMR system

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USE OF IT TOOL FOR ALTERNATE DAY MEDICATION REVIEW TO ENHANCE PHARMACIST WORK EFFICIENCY

- SAFETY
- PRODUCTIVITY
- PATIENT EXPERIENCE
- QUALITY
- VALUE

MEMBERS: QUEK HUI CHEN, YEO CHAY LENG, NG CHOY MOON

Define Problem/Set Aim

Opportunity for Improvement

With the opening of two new wards in JCH since Nov 2017 and staff attrition in JCH Pharmacy, combined inpatient and outpatient workload has increased by an average of 70% per staff for JCH pharmacy. In order to cope with this increased workload, there is a need to look into ways to increase staff productivity. One of the core service areas of JCH pharmacy is medication review. As stable community hospital patients are reviewed by doctors on alternate day basis, we sought to identify these stable patients for alternate day medication review to improve work efficiency.

Aim

Harness IT to identify clinically stable inpatients for alternate day medication review on JurongHealth Campus EMR system to reduce time spent on daily medication review by pharmacists by 30 minutes per pharmacist per day. We aim to achieve this in 6 months.

Establish Measures

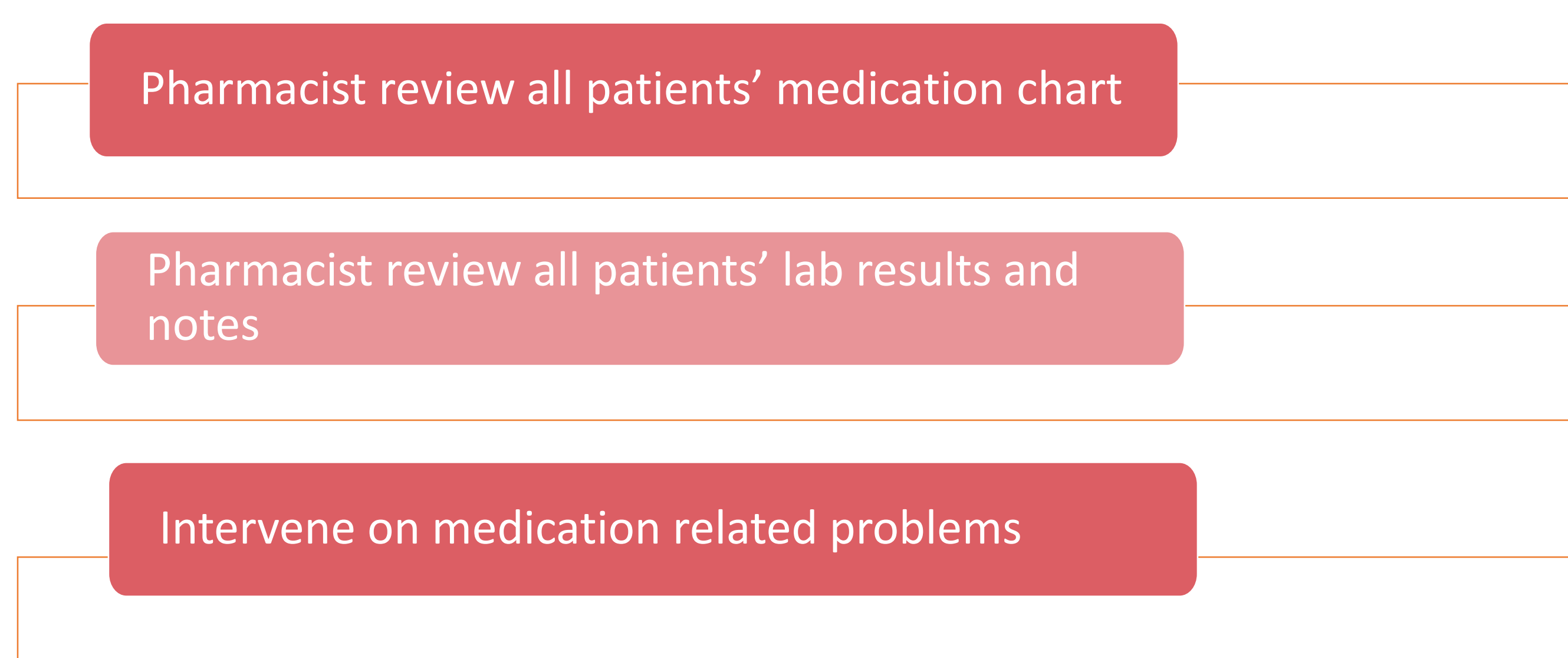
What is your current performance?

Based on baseline data collected from 1st to 31st July 2018, a JCH pharmacist spent an average of 5 minutes per medication review for existing patients, and 20 minutes for new admissions*.

Category of patients	Patient load/day/staff	Time taken*/mins
Existing patients	80	80x5 = 400
New admissions	5	5x20 = 100
Total time required		500 mins =8.33 hours

Analyse Problem

Existing workflow was for pharmacist to review all patients' medications daily.



However, this does not add value to some of the clinically stable patients with no medication changes.

A discussion was undertaken with the Head of pharmacy, JCH about identifying these stable patients to exempt them from daily medication review to improve work efficiency of pharmacists.

Proposed solution:

- Identify key set of criteria to identify these stable patients
- Use IT to identify these patients to save time from manually screening through the criteria

Select Changes

A) A roundtable discussion was undertaken with doctors to identify the exclusion criteria of patients from alternate day medication review. These exclusion criteria include:

1. Subacute status
2. Within 3 days of admission or 2 days prior to discharge
3. On High Alert Medications e.g. anticoagulants, digoxin, IV electrolyte replacements or drugs requiring TDM
4. Medication changes
5. New laboratory results or Doctor's input

B) An IT tool was designed to track these criteria on the JurongHealth Campus EMR system and patient not meeting the exclusion criteria were selected for alternate day review.

Test & Implement Changes

PLAN

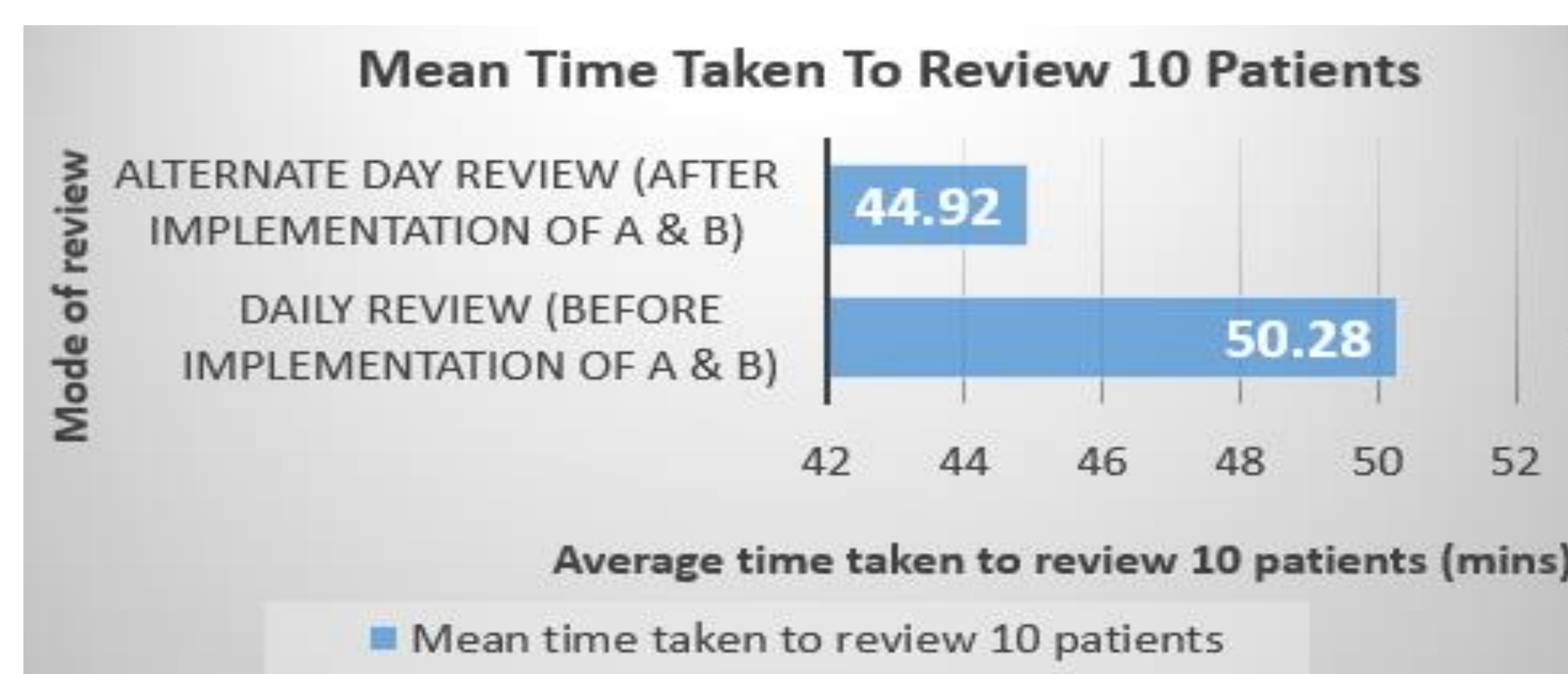
Alternate day review with the IT tool was piloted on 10 JCH patients for 5 pharmacists over 10 days.

DO

In November 2018, each pharmacist trialed the new tool during medication review and collected data for the time taken for alternate day review versus daily review of 10 patients over 10 days.

STUDY

For the study, each pharmacist review 10 patients. Time taken to review 10 patients on a daily and alternate day review were collected. From the data collected by 5 pharmacists, approximately 42 minutes could potentially be saved per day per staff with this new strategy.



Time saved/10 patients = 5.36 min

Time saved/10 patients/pharmacist = 5.36 x 8# = 42.88 min

(#: each pharmacist reviews an average of 80 patients/day)

ACT

Results from the pilot study was presented to the MD, JCH, who had approved it to be implemented. The strategy was shared with the medical and pharmacy teams and has been implemented in June 2019. Monitoring of any potential safety issues that may arise is ongoing.

Spread Change/Learning Points

1. IT can be harnessed to identify target population group who require more care, thereby helping to focus time and effort on patients who need it most and improving operational efficiency.
2. Time saved could be used constructively in other areas such as workflow improvement projects and patient education.

