Improvise.Adapt.Overcome

Singapore Healthcare Management 2022

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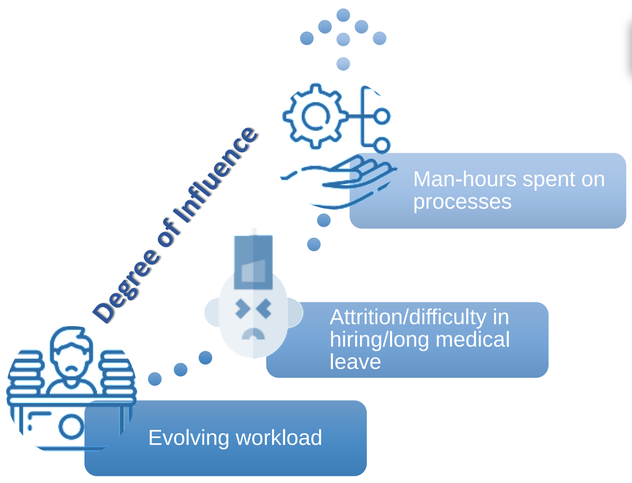
INTRODUCTION

The Covid-19 pandemic has presented us with new challenges and uncertainties. The low staffing levels and difficulty in hiring have prompted us to brainstorm on novel ways to **reinstate the balance between workload and staffing**. We reviewed our sphere of influence and decided to focus on areas that we can exert a greater influence on – **reduction of man-hours spent on work processes.**

OBJECTIVES

To streamline processes in Emergency Pharmacy (EP) and Inpatient Pharmacy Automation Service (IPAS) with the ultimate goal in **reduction in man-hours** so that staff can focus on the delivery of patient care.

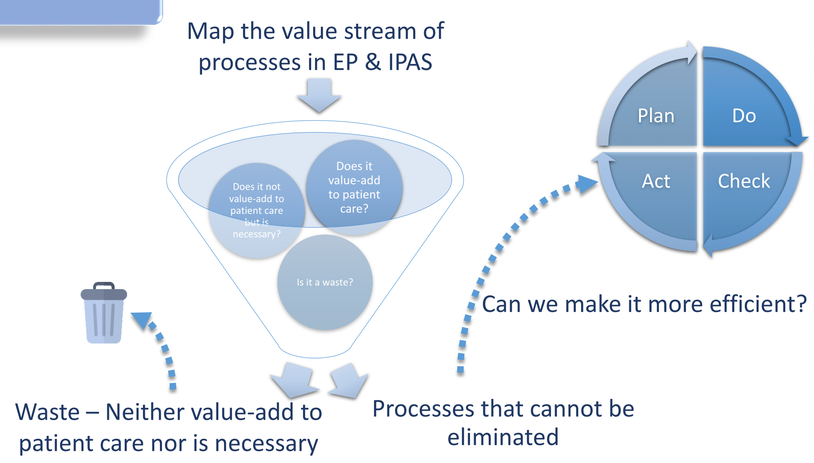


METHODOLOGY

Existing processes in EP and IPAS were analyzed for **redundancy** and **improvement** using Plan-Do-Check-Act (PDCA) and Lean Thinking methodologies[1].

Pre- and post-intervention time studies were conducted to determine the savings in man-hours.

Numerous opportunities were identified for improvement and currently available resources were leveraged as far as possible.



RESULTS

1. Triage of Phone Counselling of Medications for Patients under Isolation

BEFORE
Phone counselling of medications for **ALL** patients under isolation (PUI).

AFTER
PUI with **COMPLICATED** medications → Phone counselling

PUI with **SIMPLE** medications → Provide leaflet with drug information, allergy status, weight and contact information for enquiries.

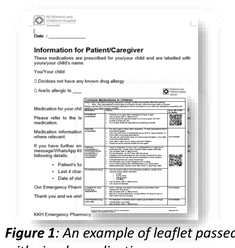


Figure 1: An example of leaflet passed to PUI with simple medications.

For the month post-intervention,
72% ↓ in phone counselling!
184.8 man-hours saved!

Figure 2: Phone counselling load decreased by 72% after triaging phone counselling of medications for PUI.

2. Tracking of Phone Counselling Replaced with Issuance of New Queue Series

BEFORE
- Queue series were issued based on clinic locations even if they are PUI.
- Staff spends an average of 30 seconds to fill up one phone counselling record in tracking form.
- Tracking could not be eliminated.

AFTER
- Many fields in the tracking form were of little value → **Removed!**
- **New queue series** was created using our current queue management system to facilitate tracking instead.

20.7 man-hours saved monthly!

3. Removal of Manual Counting of Prescriptions

BEFORE
Staff spends an average of **30 minutes** a day **counting** prescriptions to tabulate workload from each service.

AFTER
Staff **DO NOT need to perform manual counting** daily.
Staff import data from queue management system into pre-formulated template monthly.

14 man-hours saved monthly!

4. Substitution of Manual Recording of Drug Returns with Photo taking

BEFORE
- Staff spends an average of **1.5 minutes** to **record** 10 drugs on drug returns form.

AFTER
- Staff spends an average of **7 seconds** to **capture and upload** 10 drug returns in a dedicated muted secure chat group.

Figure 3: An example of capturing drug returns and uploading in a dedicated secure chat group.

4.3 man-hours saved monthly!
↓ Paper waste!
↑ Ease of investigating inventory discrepancies!

5. Utilization of SharePoint Views to Streamline Ward Stock Changes

BEFORE
Changes in ward stock → Staff update in SharePoint for nurses to order. → Staff update summary **Excel Database.** → Staff update **Excel topping up form.** → Staff print topping up form weekly.

AFTER
Changes in ward stock → Staff update in SharePoint for nurses to order. → **SharePoint views auto-populate summary database and topping up form.** → Staff print topping up form from SharePoint directly.

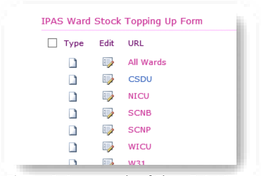


Figure 4: An example of SharePoint View.

4.2 man-hours saved monthly!

6. Pre-formulated PivotTable for Drug Costing

BEFORE *Manual entry into costing form*
Stock adjust in billing system/record drips in tracking form. **Manually enter each drug into costing form.** Submit costing report & turnaround time report.

AFTER *Pre-formulated Costing Report using PivotTable*
Stock adjust in billing system/records drips in tracking form. **Import records into pre-formulated template.** Submit costing report & turnaround time report.

4.8 man-hours saved monthly!
↓ Transcription errors!

Solutions implementation costs = $0

Total of **232.8** man-hours savings per month!

2794 man-hours savings per annum!

$135,411 cost savings per annum!

CONCLUSION

- This study demonstrates that seemingly insignificant differences in how we carry out our work can accumulate to significant time and cost savings, allowing staff to focus on their core responsibilities of delivering quality patient care.
- Change is an inevitable constant and resources are often limited - we will continue to review, improve and adapt our processes to overcome the evolving challenges.

ACKNOWLEDGEMENTS

This project would not have been possible without the support and hard work put in by EP and IPAS staff.
We would like to thank Ms Oh Ching Ching (HOD, Pharmacy, KKH) and Ms Janice Lim (Deputy HOD, Pharmacy, KKH) for their advice and guidance.
We would also like to thank Ms Evelyn Loh (Finance, KKH) to help us calculate the cost savings.

REFERENCES

[1]Arnout Orelio (2020).Lean Thinking for Emerging Healthcare Leaders. Business Express Press.
- Our illustration of tardigrade, a microscopic animal that is renowned for its ability to survive extreme conditions. This symbolizes the spirit of improvement and adaptability in order to overcome the challenges.