# CENTRE FOR HEALTHCARE INNOVATION

#### CHI Learning & Development (CHILD) System

#### **Project Title**

Mundane to Meaningful: A Journey towards a paper Less Care Cost Discussions

#### **Project Lead and Members**

- Tan Mei Fen, Cai Yanlong
- Miriam Soh Yixin
- Sheila Marie DeMesa
- Kong Jie Ying
- Shehan Sharmine Binte Musa
- Care Cost Team (Inpatient Operations)

#### **Organisation(s) Involved**

Changi General Hospital

#### **Healthcare Family Group Involved in this Project**

Healthcare Administration

#### **Applicable Specialty or Discipline**

**Inpatient Operations** 

#### **Project Period**

Start date: August 2019

Completed date: October 2021

#### Aims

 To reduce time spent on manual processes (e.g. filing, sorting, distributing) and increase meaningful engagement with patients



#### CHI Learning & Development (CHILD) System

#### **Background**

See poster appended/below

#### **Methods**

See poster appended/below

#### **Results**

See poster appended/ below

#### Conclusion

See poster appended/below

#### **Project Category**

Care & Process Redesign

Productivity, Cost Saving, Manhour Saving, Time Saving

Quality Improvement, Job Effectivess

Value Based Care, Patient Satisfaction

#### **Keywords**

Digitalization, Paperless Management.

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# Mundane to Meaningful: A Journey towards a paper-less Care Cost Discussions



Tan Mei Fen, Cai Yanlong, Miriam Soh Yixin, Sheila Marie DeMesa, Kong Jie Ying, Shehan Sharmine Binte Musa, Care Cost Team (Inpatient Operations), Changi General Hospital

Background

Beyond conducting care cost discussions with patients and their next-of-kin, our Care Cost Advisors also manage a high volume of Financial Counselling (FC)-related documents such as Care Cost Form, Consent for Data Sharing, Medical Claims Authorisation Form and Letter of Guarantee.

Singapore Healthcare

Management 2022

Traditionally, the team used a physical folder for each admission episode as a storage tool and aid for case assignment. Handling the physical folders and hardcopy forms manually is mundane and inefficient.

In line with the national and cluster initiative for digitalization, CGH Inpatient Operations initiated and facilitated a revamp of end-to-end process to create a paper-less environment for our care cost advisors and stakeholders (e.g. A&E operations, Business Office) in their FC journey.

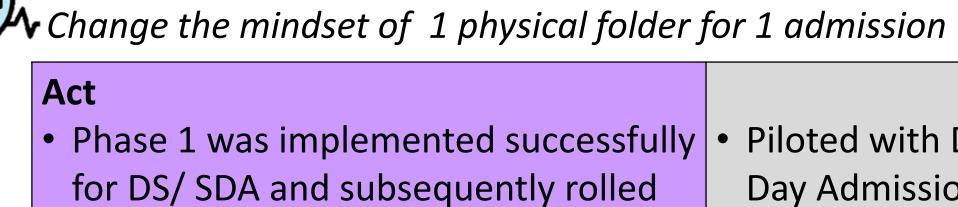
### To reduce time spent on manual processes (e.g. filing, sorting, distributing)

Aims

meaningful engagement with patients

# Methods

The entire project was implemented in 3 phases. The infographic below indicates the timeline of each stage and their PDSA cycle.



Phase 1: Re-scope elective cases (Aug 2019)

- Plan Piloted with Day Surgery (DS) / Same Day Admissions (SDA)
- Engaged stakeholder, i.e. Business Office for process changes

Study Cost Unnecessary paper trails Efficiency and productivity

out to Endoscopy and elective

admissions.

Reduced the usage of physical folders, i.e. 1 physical folder for admissions on the same day

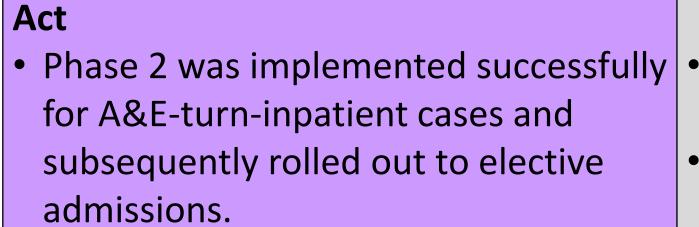
Plan

Do

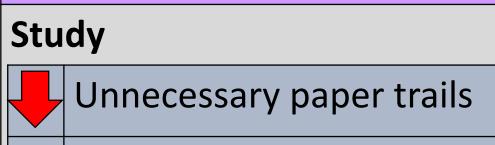
Plan

# Phase 2: Remove unnecessary documents in physical folders (Dec 2020)

Question the essentiality of physical folders



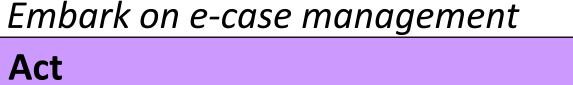
- Reviewed and removed unnecessary hardcopy forms from physical folders
- Right sited documents that can be stored electronically in the existing systems / applications



Accessibility to information Usage of existing systems/ applications

- Uploaded scanned copies of forms to the existing systems/ applications
- Increased the usage of e-signature friendly tools





- After the implementation of Phase 3, physical folders are no longer required for case assignment/ management.
- Engaged stakeholders, e.g. A&E Operations and Business Office for process changes
- Created timeline for implementation in phases

# Study

Motion waste Storage and clutter Man-hours Cost

Unnecessary paper trails

Patient & staff satisfaction Efficiency and productivity Accessibility to information Usage of existing systems/ applications

- Do Created a Microsoft Excel worklist for e-case assignment/ management
- Created new process for filing documents, i.e. filing based on discharge date

### Results

~\$10,800 / annum Reduction in cost

100%

information

98%

Reduction in storage and

clutter

Yearly savings on physical folders

 $$0.21 \times ^{140}$  (average daily admissions)  $\times 365 = ^{\$}10,800.00$ 

**Before:** Retrieval of physical documents is required when investigating past cases Increased accessibility to

After: E-copies are available in systems/ applications for reference when investigating past cases

| Departments             | Before   | After  |
|-------------------------|--|--|
| A&E Operations          |  | The state of the s |
| Inpatient<br>Operations | To an analysis of the second s | SECTION OF THE PARTY OF THE PAR |
| Business Office         |  |  |

Better Workplace Safety **Before:** Staff need to push trolley (with stacks of physical folders) weighing 103.5kg

**After:** Staff can hand carry a stack of documents weighing <u>5.47kg</u>

60% Increase in time spent engaging patients

Changes to the processes (as shown in the table below):

Staff spent 3 hours less per day in handling the paperwork and are able to spend more time engaging patients.

| me<br>pent/  | Before (5 hours/ day)   | After (2 hours/ day)   |
|--------------|---|--|
| dmin<br>asks | <ul> <li>Sorting/ checking all physical folders to identify new admissions/ transferred cases/ discharged cases</li> <li>Tallying folders with patient lists</li> <li>Sorting/ filing documents in folders</li> <li>Inputting remarks on folders</li> </ul> | <ul> <li>Using Microsoft Excel (filter/ VLOOKUP) to identify new admissions/ transferred cases/ discharged cases</li> <li>Inputting remarks in Microsoft Excel worksheet that provides staff an overview of their cases</li> </ul> |

### **70%** Reduction in motion waste

Removing unnecessary movements while handling physical documents, reducing motion waste from 27 to 8 movements

Uploading documents to systems

17,940 hours/annum Man-hour saving

Yearly savings on man-hours (channeled to value-added work) 3 hours (time saved/day) x 260 (working days/annum) x 23 (pax) = 17,940 hours/ year

# 100% Staff Satisfaction

I feel a great sense of relief as a case manager when my patients are able to go home with peace of mind that everything is settled.

It gives me a greater sense of achievement knowing that I can complete my work as a case manager on time.

85.6% **Patient Satisfaction**  Based on patient engagement survey, most patients were happy with our staff's explanation.

## Challenges

☑Differing learning curves and motivational factors amongst team members ☑ Multiple layers of overlapped processes and cross-departmental collaborations

### **Conclusion & Future Developments**

This project is a culmination of phases of improvement works, to increase productivity, to save time spent on mundane processes, in an effort for case management to be more patientcentric. It demonstrates potential to further scalability. We have received positive feedbacks upon completion, and other departments such as X-Ray and A&E Operations have also shown interest in adopting the initiative for their own areas.

The team is making ongoing efforts to further improve the project and we envision the road shead act

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|---|---|
| Paper-less to Paperless   | Enhancement of e-case management  |
| <ul> <li>Fully equipping staff with e-signature<br/>friendly tools</li> </ul> | <ul> <li>Utilizing e-worklist for data analytics and dash boarding / deployment</li> <li>Improving network stability / security for e-worklist storage (ultimate digitalization)</li> </ul> |