

## **Project Title**

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

## **Project Lead and Members**

Project Lead(s): Kong Jie Ying

Project Members: Soh Yixin Miriam, Tan Mei Fen, Cai Yan Long, Cheng Mei Chen, Ng Ching Hui Stephanie

## **Organisation(s) Involved**

Changi General Hospital

## **Healthcare Family Group(s) Involved in this Project**

Healthcare Administration

## **Project Period**

Start date: Dec 2020

Completed date: Oct 2021

## **Aim(s)**

In line with 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 in their Financial Counselling journey.

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

## **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**

See poster appended/ below

### **Project Category**

Technology, Digitalisation, Digitisation

Care & Process Redesign, Value Based Care, Productivity, Manhour Saving, Time Saving, Cost Saving

Organisation Leadership, Organisation Development, Change Management, Behaviourial Change, System Change

### **Keywords**

Digitisation, Digitization, Digitalisation, Digitalization, Paperless, Case Management, Paper Trails

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

## 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.

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.

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

## Methods

The entire project was implemented in 2 phases. The infographic below indicates the timeline of each stage and their PDSA cycle.

### Phase 1: Remove unnecessary documents in physical folders (Dec 2020)

*Question the essentiality of physical folders*

Act	Plan
<ul style="list-style-type: none"> <li>Phase 1 was implemented successfully for A&amp;E-turn-inpatient cases and subsequently rolled out to elective admissions.</li> </ul>	<ul style="list-style-type: none"> <li>Reviewed and removed unnecessary hardcopy forms from physical folders</li> <li>Right sited documents that can be stored electronically in the existing systems / applications</li> </ul>
Study	Do
<ul style="list-style-type: none"> <li>Unnecessary paper trails</li> <li>Accessibility to information</li> <li>Usage of existing systems/ applications</li> </ul>	<ul style="list-style-type: none"> <li>Uploaded scanned copies of forms to the existing systems/ applications</li> <li>Increased the usage of e-signature friendly tools</li> <li>Leveraged on new digital platforms such as Digital IC, HealthHub, HealthBuddy</li> </ul>

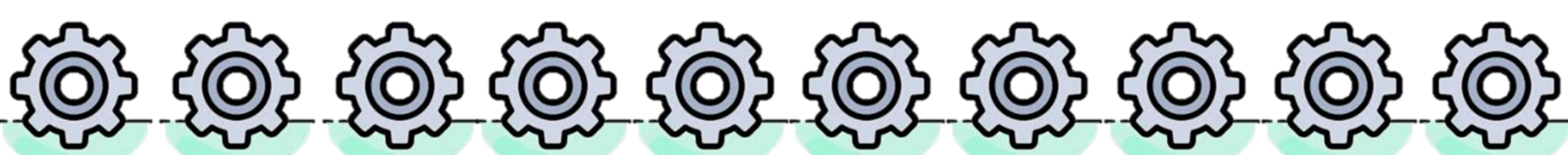
### Phase 2: Redefine physical folders (Oct 2021)

*Embark on e-case management*

Act	Plan
<ul style="list-style-type: none"> <li>After the implementation of Phase 2, physical folders are no longer required for case assignment/ management.</li> </ul>	<ul style="list-style-type: none"> <li>Engaged stakeholders, e.g. A&amp;E Operations and Business Office for process changes</li> <li>Created timeline for implementation in phases</li> </ul>
Study	Do
<ul style="list-style-type: none"> <li>Motion waste</li> <li>Storage and clutter</li> <li>Man-hours</li> <li>Cost</li> <li>Unnecessary paper trails</li> <li>Patient &amp; staff satisfaction</li> <li>Efficiency and productivity</li> <li>Accessibility to information</li> <li>Usage of existing systems/ applications</li> </ul>	<ul style="list-style-type: none"> <li>Created a Microsoft Excel worklist for e-case assignment/ management</li> <li>Created new process for filing documents, i.e. filing based on discharge date</li> </ul>

## Challenges

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



## Results

**~\$10,800 / annum**  
Reduction in cost  
Yearly savings on physical folders  
 $\$0.21 \times \sim 140$  (average daily admissions)  $\times 365 = \sim \$10,800.00$

**100%**  
Increased accessibility to information

**98%**  
Reduction in storage and clutter



**Better**  
Workplace safety

**60%**  
Increase in time spent engaging patients

Time spent/ Admin tasks	Before (5 hours/ day)	After (2 hours/ day)
	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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> <li>Uploading documents to systems</li> </ul>

**70%**  
Reduction in motion waste  
Removing unnecessary movements while handling physical documents, reducing motion waste from 27 to 8 movements

**17,940 hours/ annum**  
Man-hour saving  
Yearly savings on man-hours (channeled to value-added work)  
 $3 \text{ hours (time saved/ day)} \times 260$  (working days/ annum)  $\times 23$  (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.

## 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 patient-centric. 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 ahead as:

Paper-less to Paperless	Enhancement of e-case management
<ul style="list-style-type: none"> <li>Fully equipping staff with e-signature friendly tools</li> </ul>	<ul style="list-style-type: none"> <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>