



# Singapore Healthcare Management 2022

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



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### 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 3 phases. The infographic below indicates the timeline of each stage and their PDSA cycle.



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

Change the mindset of 1 physical folder for 1 admission

<b>Act</b> <ul style="list-style-type: none"> <li>Phase 1 was implemented successfully for DS/ SDA and subsequently rolled out to Endoscopy and elective admissions.</li> </ul>	<b>Plan</b> <ul style="list-style-type: none"> <li>Piloted with Day Surgery (DS) / Same Day Admissions (SDA)</li> <li>Engaged stakeholder, i.e. Business Office for process changes</li> </ul>
<b>Study</b> <ul style="list-style-type: none"> <li>Cost</li> <li>Unnecessary paper trails</li> <li>Efficiency and productivity</li> </ul>	<b>Do</b> <ul style="list-style-type: none"> <li>Reduced the usage of physical folders, i.e. 1 physical folder for admissions on the same day</li> </ul>

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

Question the essentiality of physical folders

<b>Act</b> <ul style="list-style-type: none"> <li>Phase 2 was implemented successfully for A&amp;E-turn-inpatient cases and subsequently rolled out to elective admissions.</li> </ul>	<b>Plan</b> <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>
<b>Study</b> <ul style="list-style-type: none"> <li>Unnecessary paper trails</li> <li>Accessibility to information</li> <li>Usage of existing systems/ applications</li> </ul>	<b>Do</b> <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> </ul>



#### Phase 3: Redefine physical folders (Oct 2021)

Embark on e-case management

<b>Act</b> <ul style="list-style-type: none"> <li>After the implementation of Phase 3, physical folders are no longer required for case assignment/ management.</li> </ul>	<b>Plan</b> <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>
<b>Study</b> <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>	<b>Do</b> <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>

### Results

~\$10,800 / annum  
Reduction in cost

Yearly savings on physical folders  
\$0.21 x ~140 (average daily admissions) x 365 = ~\$10,800.00

100%  
Increased accessibility to information

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

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

98%  
Reduction in storage and clutter

Departments	Before	After
A&E Operations		
Inpatient Operations		
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 5.47kg

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.

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 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 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>