Singapore Healthcare Management 2024

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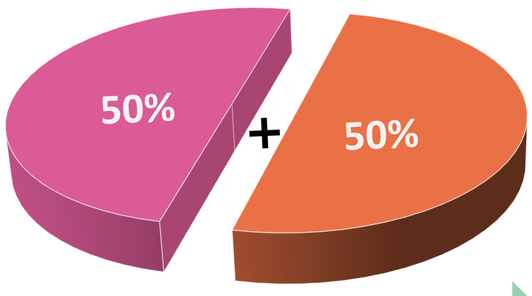
## Introduction

Speech Therapists (STs) review an average of 760 dysphagic patients monthly but face challenges in directly updating patients and their caregivers daily after reviews.

**Prioritised cases**
Phone call updates, which takes up time.




**Non-prioritised cases**
Physical handouts are left in patients' file, which can be lost or overlooked.

### Consequences

- Delay in updating caregivers
- Non-compliance to diet and fluids
- Increased risk of penetration and/or aspiration, compromising swallow safety

### Aim

For ST to send out **timely and personalised electronic communications** regarding dysphagia, fluids and diet recommendations and oral toileting practices to caregivers of patients with dysphagia.

## Methodology

ST's physical handouts are converted to digital format to improve accessibility, usability, and overall user experience (UX) for the caregivers.

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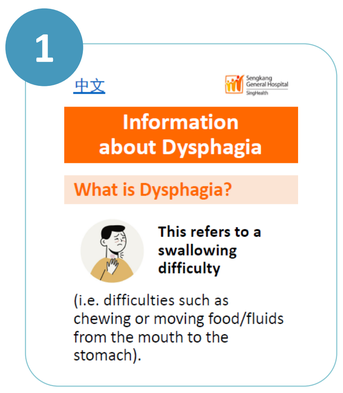


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OPEN GOVERNMENT PRODUCTS
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**Curated personalised and digital handouts**

- **Content Restructuring** to enable personalisation of recommendations for individual patients.
- **Digital Platform:** PDF format was selected.
- **UX Design Considerations** on screen size compatibility, layout, colour scheme and graphics enhanced clarity and engagement.
- **Usability Testing** conducted to gather feedback and refine digital handouts based on user input.

**Automated communication of digital handouts**

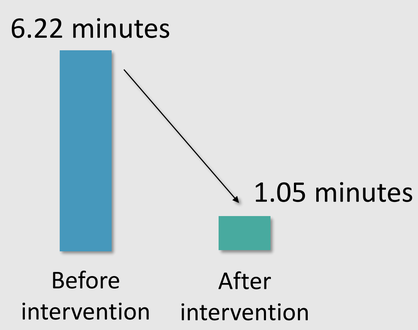
- **Accessibility:** Uploaded to OGP's For.sg for secured access and to create shortened links.
- **Automated Communication:**
  - Robotic Process Automation (RPA) used for personalised SMS delivery to caregivers.
  - SMS includes shortened links to digital handouts.

## Results

Time Motion Study was conducted to compare average time taken before and after intervention on 30 randomly selected dysphagic patients. Caregivers of these patients were called 2 to 3 weeks post intervention, and a predetermined list of questions were asked to record caregivers' compliance and feedback. Patients who are nil by mouth (NBM) or opted for at own risk feeding were excluded.

## Results

Average Time Taken To Communicate with Caregivers




**5.17 minutes**
saved by ST for every caregiver they reached out to

Translates to **32.72 manhours** saved a month

*Based on time motion study done on 30 counts

Caregivers' feedback:

- "Pleasantly surprised that there is an SMS to inform about swallowing condition, it's a good feature to have in case the helper did not convey the right info, or if ST did not manage to update on time."
- "Good initiative, tend to forget recommendations after discharge, can share with helper as well since they are the ones preparing the diet/fluid most of the time."

## Conclusion

With our intervention of sending out SMSes, SKH STs are expecting to save 32.72 manhours a month from calling and/or printing out physical handouts to be placed in patients' files. This pilot trial allowed for timely and wider outreach to all caregivers, regardless of prioritisation, within the same day. This approach has established an effective and direct communication channel, reducing the risk of patients developing aspiration pneumonia.

**32.72 manhours**
expected to be saved by 20 STs per month at time of study

**Timely and wider outreach**
to caregivers on latest diet and fluids recommendations within the same day

A second run of this pilot study with a larger sample size is recommended due to:

- Significant reduction in the existing sample size attributed to patient mortality.
- Discrepancy between the main spokesperson identified on Citrix and the primary caregiver for the patient.

The subsequent study would facilitate investigation into the impact of sending electronic handouts on caregivers' compliance, despite its convenience and time-saving nature.