

## **Project Title**

Nurse-Led Short Swallowing Screening for Older Adult Patients in Medical Wards: An Evidence-Based Quality Improvement Project

## **Project Lead and Members**

Project lead: Naw Hnin Yee Aye (Senior Nurse Clinician), Guo Yiting Emily (Principal Speech Therapist)

Project members: Chloe Ang (Senior Speech Therapist), Stephanie Hong (Speech Therapist), Yin Yin Khaing (Senior Staff Nurse), Adeline Khor (Senior Staff Nurse), Dr Matthew Chen (Consultant)

## **Organisation(s) Involved**

National University Hospital

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

Allied Health, Nursing, Medical

## **Applicable Specialty or Discipline**

Speech Therapy, Geriatric Medicine

## **Project Period**

Start date: August 2020

Completed date: Ongoing

## **Aims**

To implement a Nurse-led speech therapist referral initiative in older adult patients using a short swallowing screening (3S) tool.

## **Background**

Despite the high incidence of dysphagia among the elderly, most health facilities do not routinely screen the elderly for dysphagia. Given that dysphagia forms a barrier

to food consumption, it is associated with risk of malnutrition, readmissions for pneumonia and increased length of stay and increased cost of hospitalisation. Hence, the early identification of dysphagia in elderly patients within hospitals is warranted. The failure to screen for dysphagia can lead to patients receiving inappropriate diets while being warded, which then increases the incidence of choking accidents.

## **Methods**

See poster attached

## **Results**

See poster attached

## **Lessons Learnt**

- 1) Assessing the causes of the problem we are trying to solve is crucial to develop appropriate solutions
- 2) Multidisciplinary teamwork is important for patient outcomes
- 3) Feedback from all staff involved is helpful to ensure successful and sustainable implementation

## **Conclusion**

The nurse-led Short Swallowing Screening Tool has significantly improved the time for Speech Therapist referrals, leading to dysphagia patients receiving accurate and timely dietary interventions. Nurses are also empowered to use this screening tool in the early identification of hospitalised older adults at risk of dysphagia and administration of appropriate diet.

## **Additional Information**

Constraints faced and solutions:

1. Nurses may not remember to use the Short Swallowing Screening Tool upon admission or transfer.
  - a. Solution: Developed an Epic Smartphase named "swallow" for easy retrieval of the screening template. Also consolidated all admission screening templates

into one comprehensive template named "admission" to streamline the process and improve efficiency. This will help ensure that all necessary screening procedures are consistently completed during the admission process.

2. Difficulty screening cognitively impaired patients admitted during the night shift, as patients are often asleep and contacting family members or previous institutions can be challenging
  - a. Solution: Nurses have been informed to ensure that the oncoming nurse follows up on the screening when the patient is more alert and responsive or to contact family members or previous institutions during more convenient hours.
3. The use of medical terminology in the template may not be easily understood by patients or family members.
  - a. Solution: Visual aids have been provided to assist nurses in guiding patients and their family members to better comprehend the questions asked.

### **Project Category**

Care & Process Redesign

Quality Improvement, Workflow Redesign, Risk Management, Adverse Outcome Reduction, Preventive Approach

### **Keywords**

Swallowing Screening Tool, Diet, IDDSI, Choke, Cough, Dysphagia, Malnutrition, Pneumonia, Thickener Fluid

### **Name and Email of Project Contact Person(s)**

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Annexes

Short Swallowing Screen (for patients aged 65 years and above)		
Questions	Please <b>TICK</b> the relevant answer Answer all 3 questions	
1. Do you need to modify the food or fluids you take? (e.g. softer or smaller pieces or blended, thickened fluids)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	<b>A. If reported, order modified diet:</b> <input type="checkbox"/> Soft and bite-sized <input type="checkbox"/> Minced and moist <input type="checkbox"/> Pureed  and/or thickener <input type="checkbox"/> Slightly thick fluid <input type="checkbox"/> Mildly thick fluid <input type="checkbox"/> Moderately thick fluid <input type="checkbox"/> Extremely thick fluid  <b>B. Monitor eating/drinking</b> <input type="checkbox"/> Refer ST <u>if coughing/choking is observed</u>	Nil action
2. Does it take longer to eat/drink than you used to?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	Monitor eating/drinking <input type="checkbox"/> Refer ST <u>if coughing/choking is observed</u>	Nil action
3. Do you cough, choke or have voice changes while eating/drinking?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	<input type="checkbox"/> Refer ST	Nil action

Interviewed: \_\_\_\_\_ (please interview family if patient has cognitive deficits)

**Short Swallowing Screen**

Which of the following diets is closest to what you/your family member eats at home? Please elaborate further if possible (e.g. cut up smaller, minced up, avoid certain food – overly dry and crumbly or sticky consistencies).

<p><b>Regular diet</b> No restrictions for food, able to take harder textures</p> 	<p><b>Soft &amp; bite-sized diet</b> May require food to be cut up into bite-sized pieces</p> 
<p><b>Minced &amp; moist diet</b> Minced and chopped up side dishes with porridge</p> 	<p><b>Pureed diet</b> Smooth blended food that do not require chewing</p> 

If you/your family member requires to drink modified fluids, which consistency of fluids do you/they require?

- Slightly-thick, mildly-thick, moderately-thick, extremely thick fluids?

Can they only drink via a certain mode?

- Teaspoon, tablespoon, cup, straw

**Valens Thixer**



IDDSI Framework	LEVEL 1 Slightly Thick	LEVEL 2 Mildly Thick	LEVEL 3 Moderately Thick	LEVEL 4 Extremely Thick
Fluid consistency		Nectar	Honey	Pudding
No. of scoops / 200ml clear liquid	2 x	2½ x	3 x	3½ x
No. of scoops / 200ml other liquid	1½ x	2 x	2½ x	3 x

**Nestle Thicken Up Clear**



IDDSI FRAMEWORK	200ml Liquids (water, juice, tea, coffee)
LEVEL 1/SLIGHTLY THICK	1 scoop/sachet
LEVEL 2/MILDLY THICK	2 scoops/sachets
LEVEL 3/MODERATELY THICK	4 scoops/sachets
LEVEL 4/EXTREMELY THICK	6 scoops/sachets*

**Precise Thick-N-Instant**



IDDSI LEVEL	COLD		HOT
	100ml	200ml	
LEVEL 2 – MILDLY THICK	1 PUMP	2 PUMPS	1 PUMP
LEVEL 3 – MODERATELY THICK	2 PUMPS	4 PUMPS	2 PUMPS
LEVEL 4 – EXTREMELY THICK	4 PUMPS	8 PUMPS	4 PUMPS
LEVEL 1 – SLIGHTLY THICK	1 PUMP PER 175ml OF WATER		

\*To note that pumps = sachets for preparation volume

Quality Improvement Project : Project /EQUIP Category

<b>Project Title 6</b>	Short swallowing screen for inpatients above 65 years		
<b>Department</b>	Nursing, Rehabilitation, Geriatric Medicine	<b>Duration</b>	3 Aug 2020-31 May 2022
<b>Team Leaders</b>	Naw Hnin Yee Aye and Guo Yiting Emily	<b>Sponsors / Facilitators</b>	Usha Devi D/O U R Menon, Lucy Leong Min Sin, Isaac Sia Kwee Mien, Reshma Merchant
<b>Team Members</b>	Naw Hnin Yee Aye, Yin Yin Khaing, Teo Jun Yi Sapphire, Guo Yiting Emily, Chloe Ang Hui Min, Stephanie Hong Shi Qi, Matthew Chen Zhixuan		

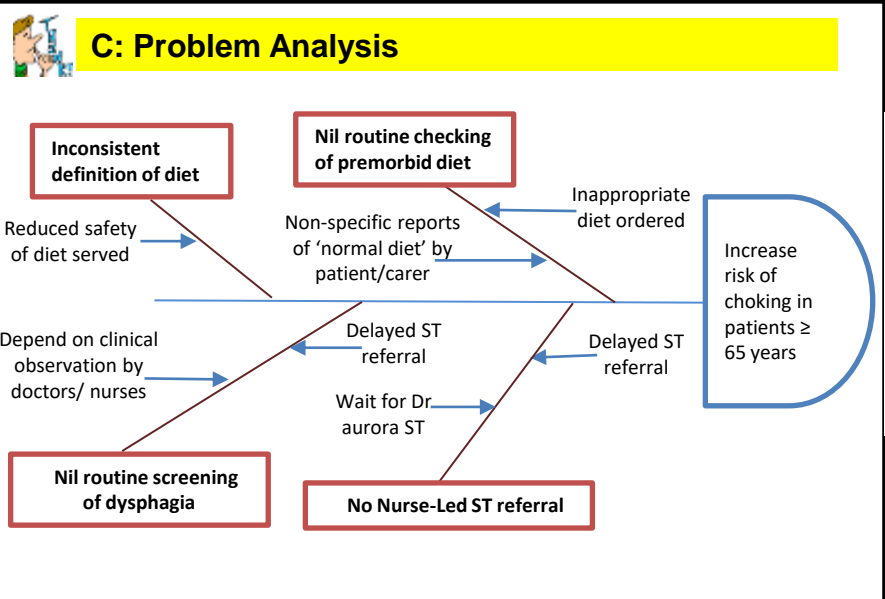
### A: Define the Problem

- Background: Prevalence of swallowing problems increases as the population ages.
- Screening for dysphagia is not routinely undertaken in the management of frail older adults (Smithard, Westmark & Melgaard, 2019). This can have adverse consequences such as patients receiving inappropriate diets and choking incidences. Since 2013 there has been 6 reported choking incidents in NUH.

### B: Goal

To reduce risk of choking in patients ≥65 years by:

- Ensuring timely Speech Therapy (ST) referrals for patients ≥65 years with dysphagia
- Ensuring patients ≥65 years who are managing on modified diet to receive the appropriate diet on admission
- Reviewing food served to patients



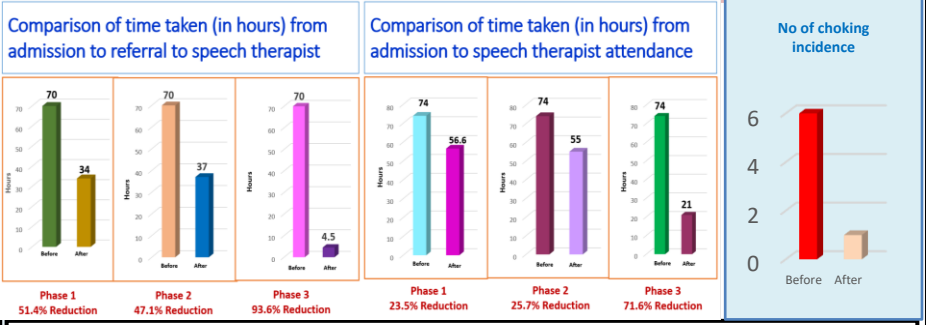
### D: Interventions & Action Plans

Problem	Intervention	Date of Implementation
1. Nil routine checking of prembid diet	<b>Phase 1 : Pilot in Wd42</b> 1. Educate and train nurses on the use of short swallow screen- (3 questions include prembid diet/fluids with specific descriptors)	1. Aug 2020
2. Nil routine screening of dysphagia	2. Educate and train nurses on the use of short swallow screen- (questions include referral instructions for ST)	2. Aug 2020
3. No Nurse-Led ST referral	3. Implement Nurse-Led ST referral workflow. Applied IT access for nurses to order ST referral.	3. Aug 2020
4. Inconsistent definition of diet	4a. Cutting of kitchen red meats into smaller pieces	4a. Feb 2020
	4b. Matching of kitchen diets to International Dysphagia Diet Standardization Initiative (IDDSI) Framework	4b. Feb 2022
	<b>Phase 2: Spread to 3 medical wards (Wd44,54,55)</b>	Dec 2020
	<b>Phase 3: Rolled out to all UMC wards (Wd33,57,61,62,5A,6A,6B,AMU)</b>	Aug 2021

### E: Benefits/ Results (Problems 1, 2, 3)

8824 patients benefitted

Patients who received Short Swallowing Screening tool	Phase 1	Phase 2	Phase 3	Patients who received appropriate diet	Phase 1	Phase 2	Phase 3
	87%	93%	81%		100%	99%	97%



### F: Strategy for Spreading/Sustaining

- Meet up with ward champions to sustain compliance rate in UMC Wards
- Spread to other clusters by Dec 2022
- Incorporate short swallowing screen into Elderly Care Bundle by Mar 2023