



SULTAN AHMAD SHAH MEDICAL CENTRE @IIUM

Establishment of a post
stroke dysphagia rehabilitation service in
an upper middle income nation.

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COI Disclosure Information

Lead Speaker : Dr Salmah Anim A.H.

I have the following financial relationships to disclose

1. Advisory role for: Nil
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INTRODUCTION

- Post stroke dysphagia rehabilitation is a key performance indicator for stroke management in Malaysia.
- Dysphagia is an independent predictor of mortality at 1 month post stroke (Hamidon et al. 2006).
- However, in Malaysia, multidisciplinary post stroke dysphagia management is not widely available due to scarcity of trained professionals, limited resources and lack of awareness.

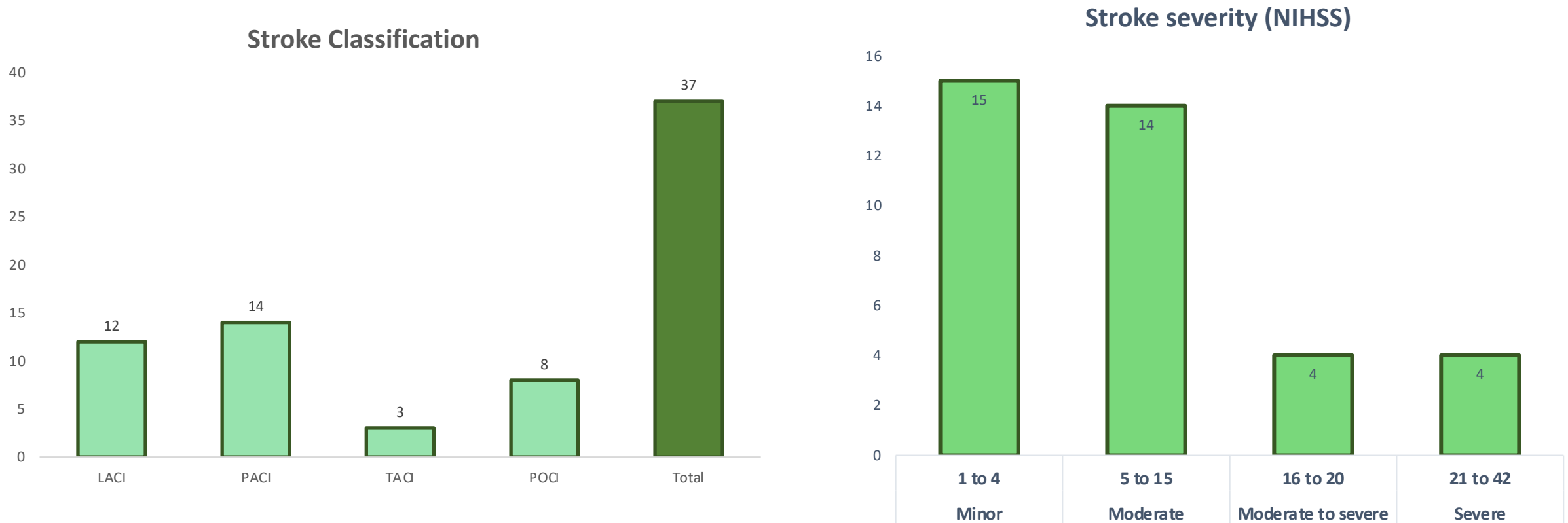
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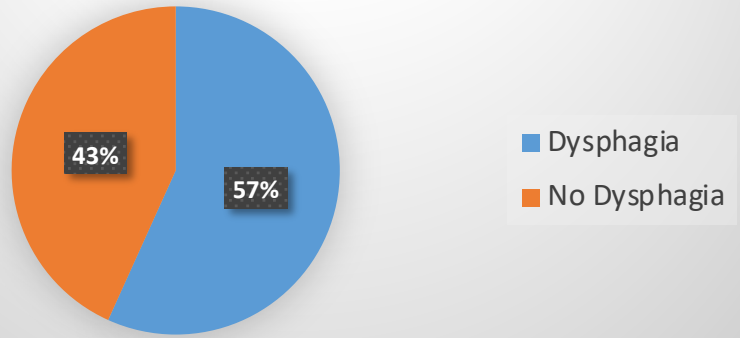
- University hospital established in 2016 with 350 bedded facility.
- Rehabilitation Medicine service started in December 2019.
- Lack of coordinated dysphagia rehabilitation for stroke patients.



Stroke referrals to Rehabilitation Medicine from June to December 2020



Dysphagia prevalence among referred stroke patients



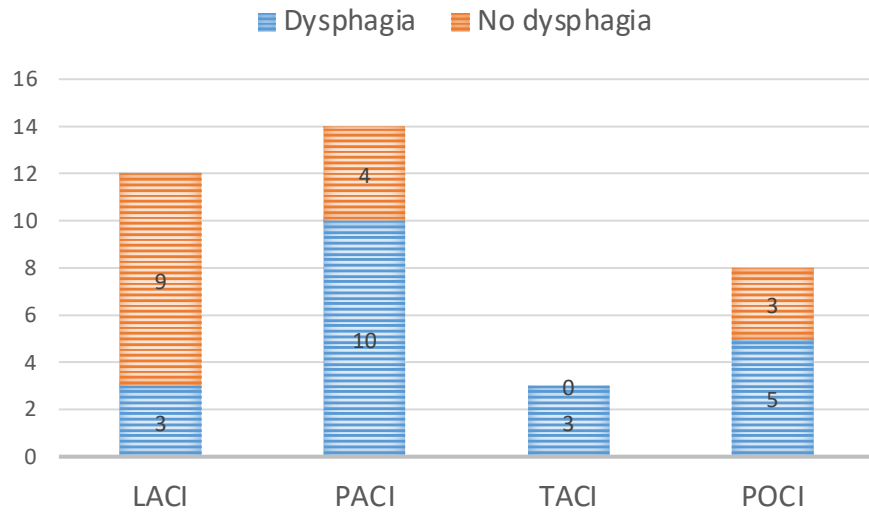
Morbidity

Aspiration pneumonia	7
Mechanical ventilation	2

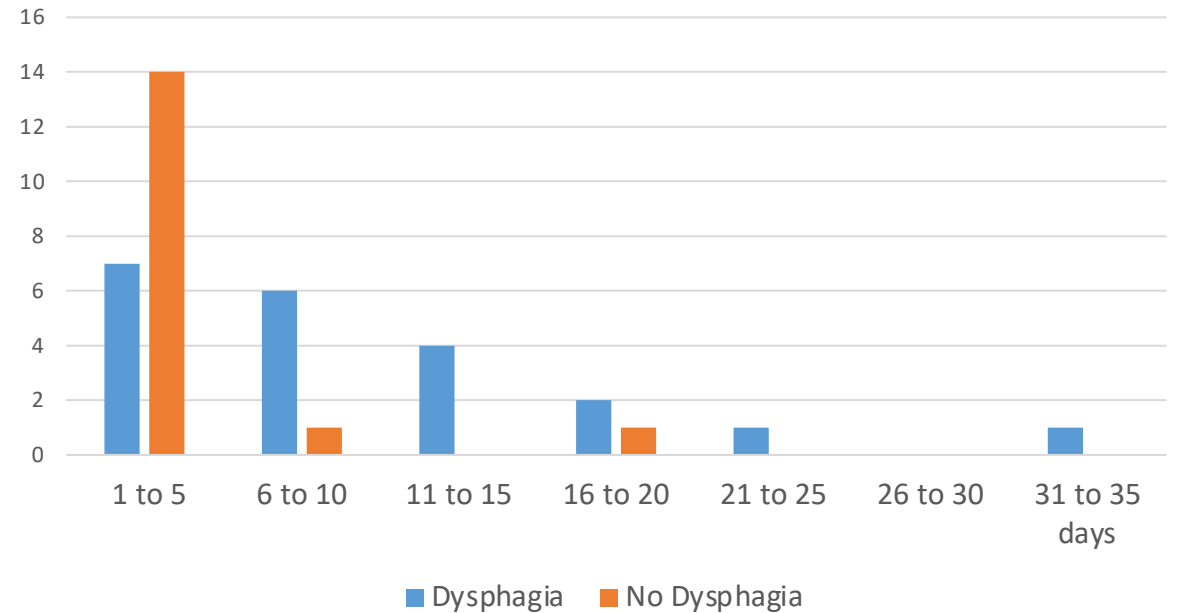
Length of stay in days (Mean)

Dysphagia	10 days
No Dysphagia	4.6 days

DYSPHAGIA PREVALENCE



Length of Stay



Urgent establishment of a coordinated post stroke dysphagia rehabilitation service in our center.

Aims:

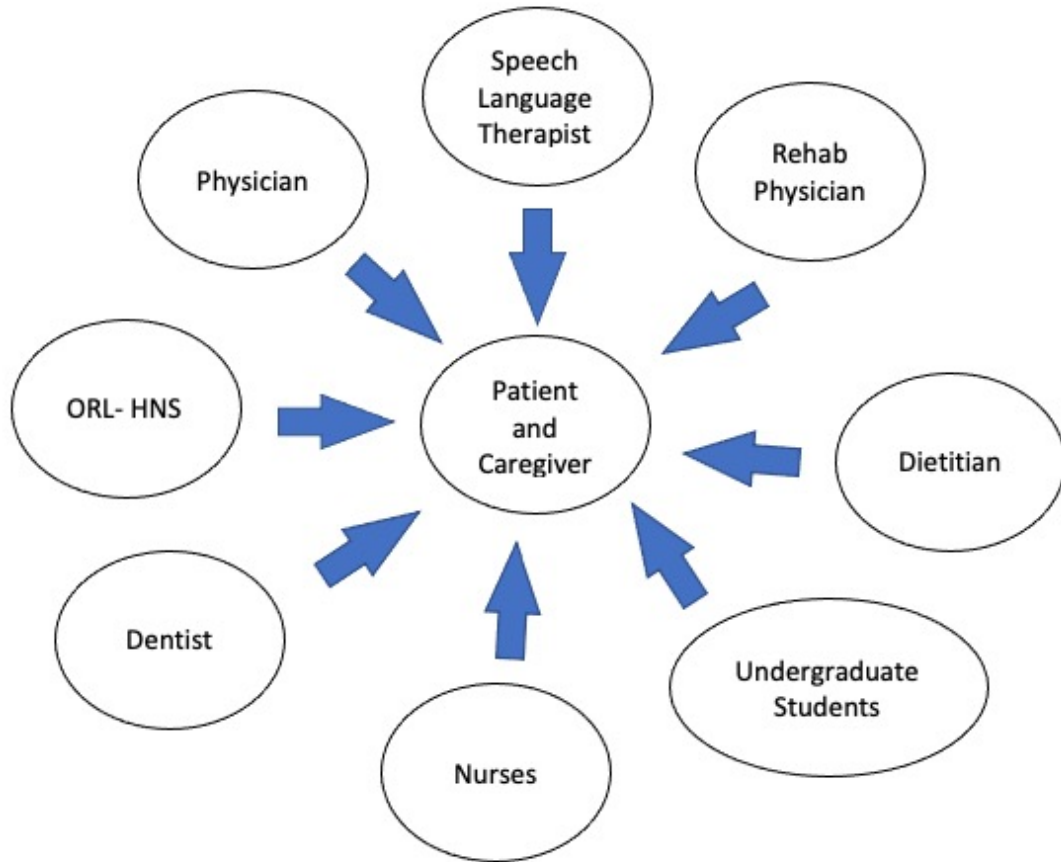
- Inpatient services
 1. Early dysphagia screening.
 2. Structured referral pathway for:
 - a. Oral hygiene assessment and care
 - b. Early intervention with dietary modification, exercises and swallowing strategies
 - c. Early instrumental swallowing assessment (FEES) if indicated
 - d. Sialorrhea management

- Outpatient services
 - a. Specialized dysphagia rehabilitation clinic to enable early review by speech language pathologist.

METHODOLOGY

Networking and collaboration between multidisciplinary teams.

Multidisciplinary Network



Core Stroke Dysphagia Rehabilitation Team members



Rehabilitation
Medicine
Doctors



Speech Language
Pathologist

Physiotherapists

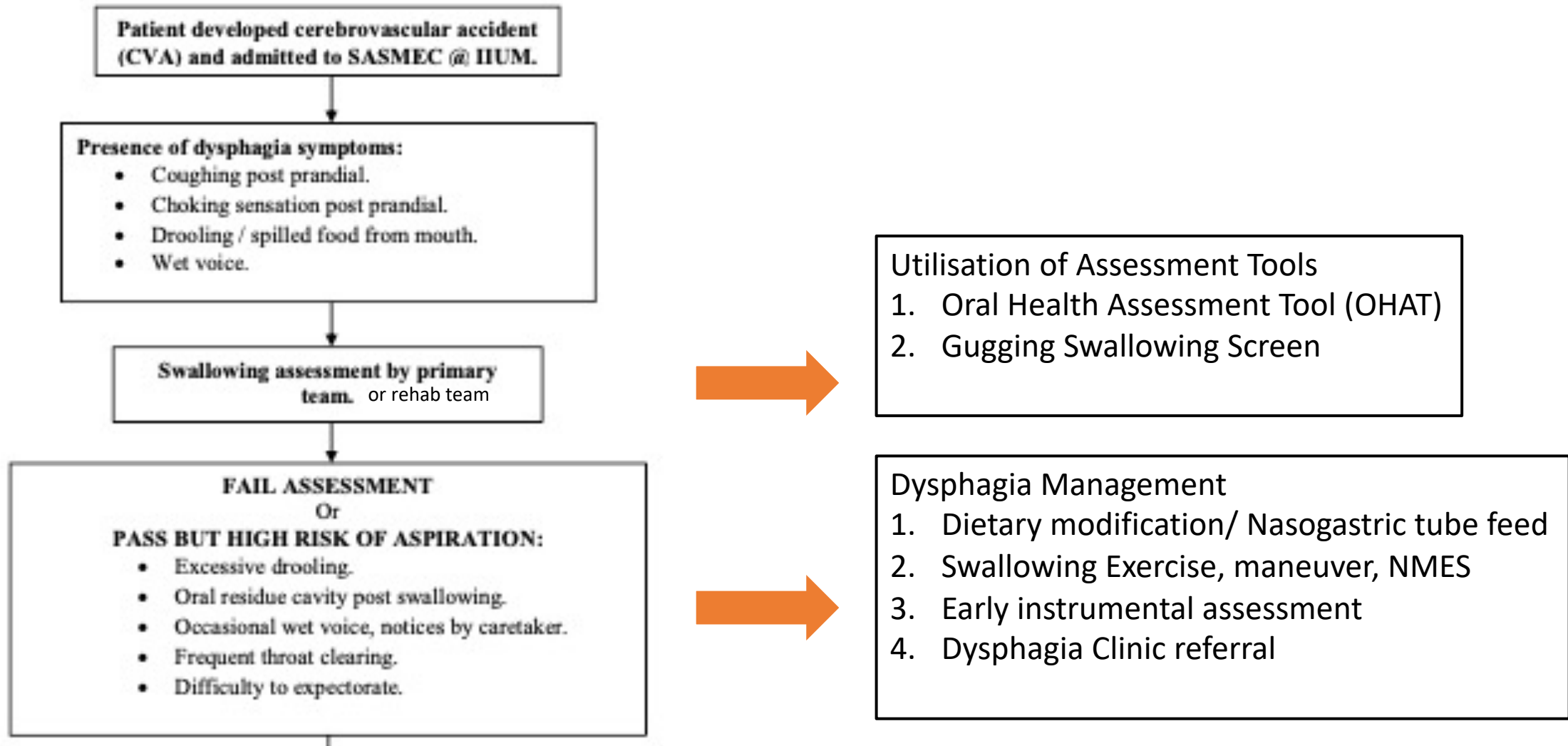


Nurse

Occupational
therapists

Development of Referral Pathway for Post Stroke Dysphagia Management

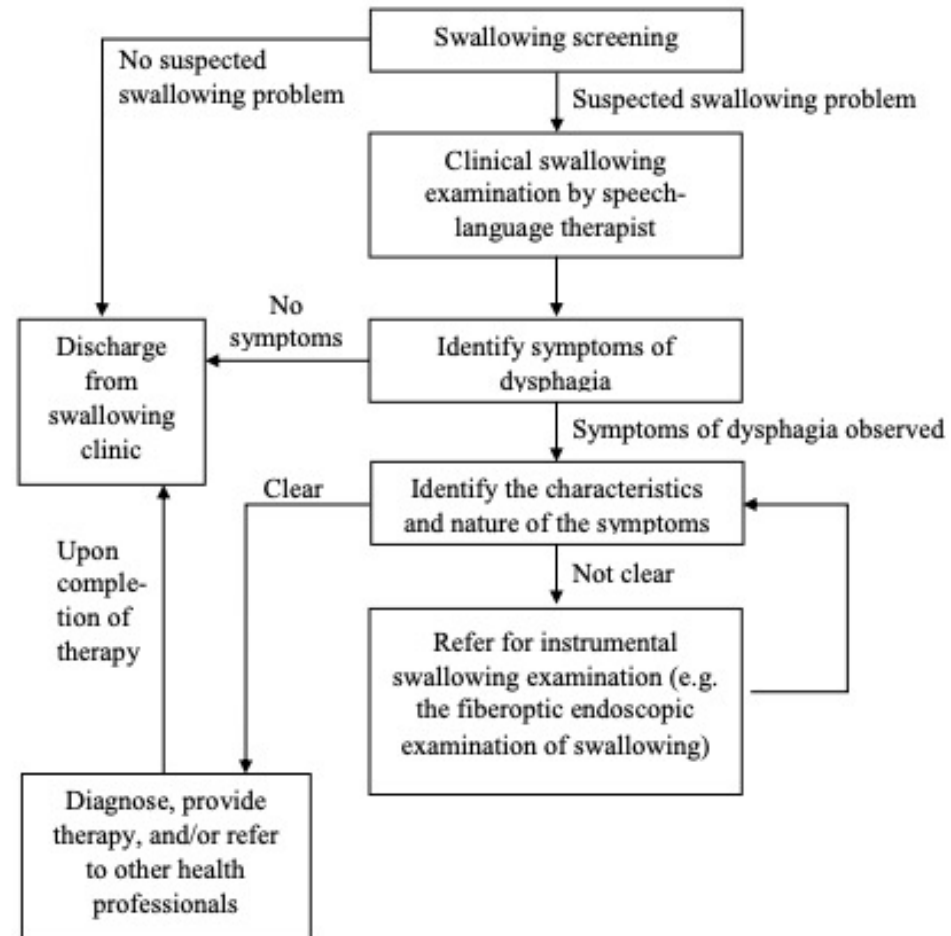
Inpatient referral



Outpatient Dysphagia Rehabilitation Clinic

SWALLOWING CLINIC, REHABILITATION UNIT
SULTAN AHMAD SHAH MEDICAL CENTRE

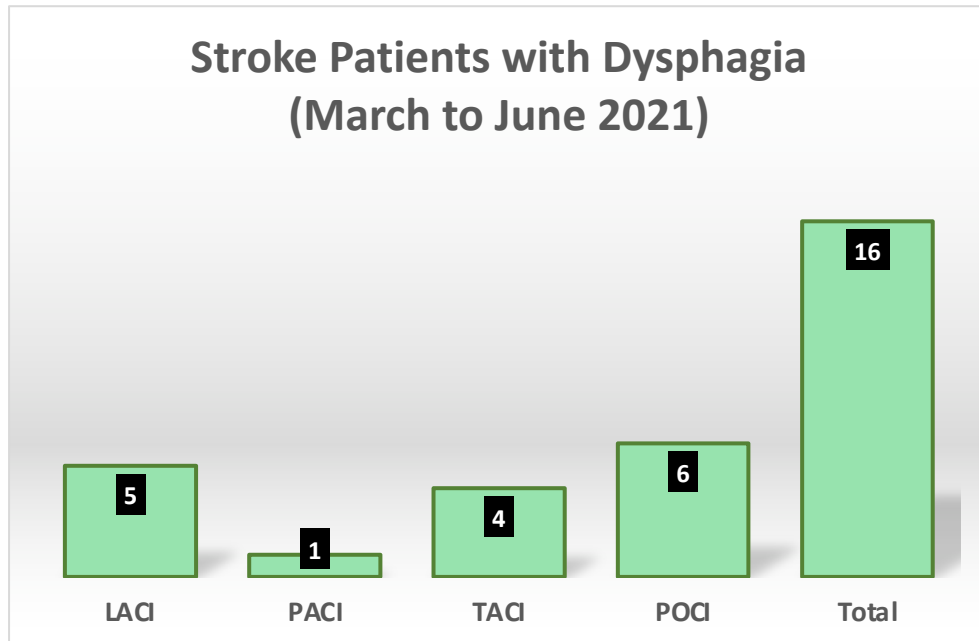
FLOW CHART OF SWALLOWING CLINIC SERVICE



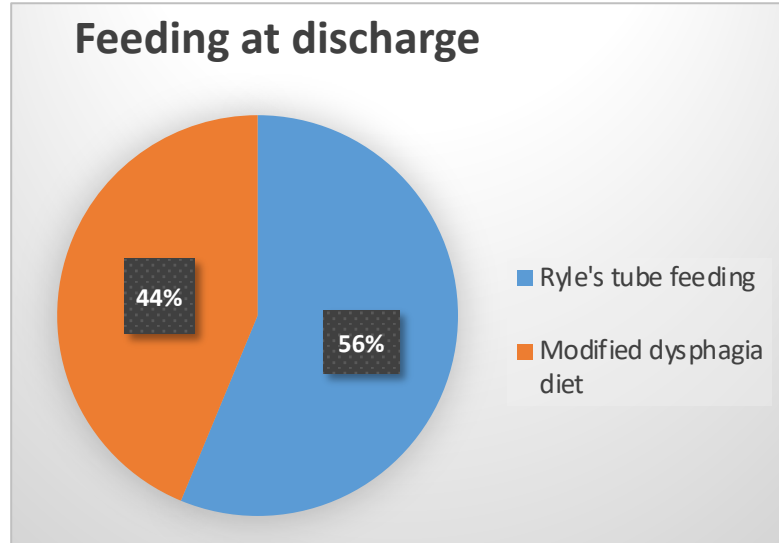
RESULTS

Inpatient Stroke Dysphagia Rehabilitation Service

Stroke referral March to June 2021	Number	%
Dysphagia	16	36%
No Dysphagia	29	64%
Total	45	-



GUSS Score	
Mean	10

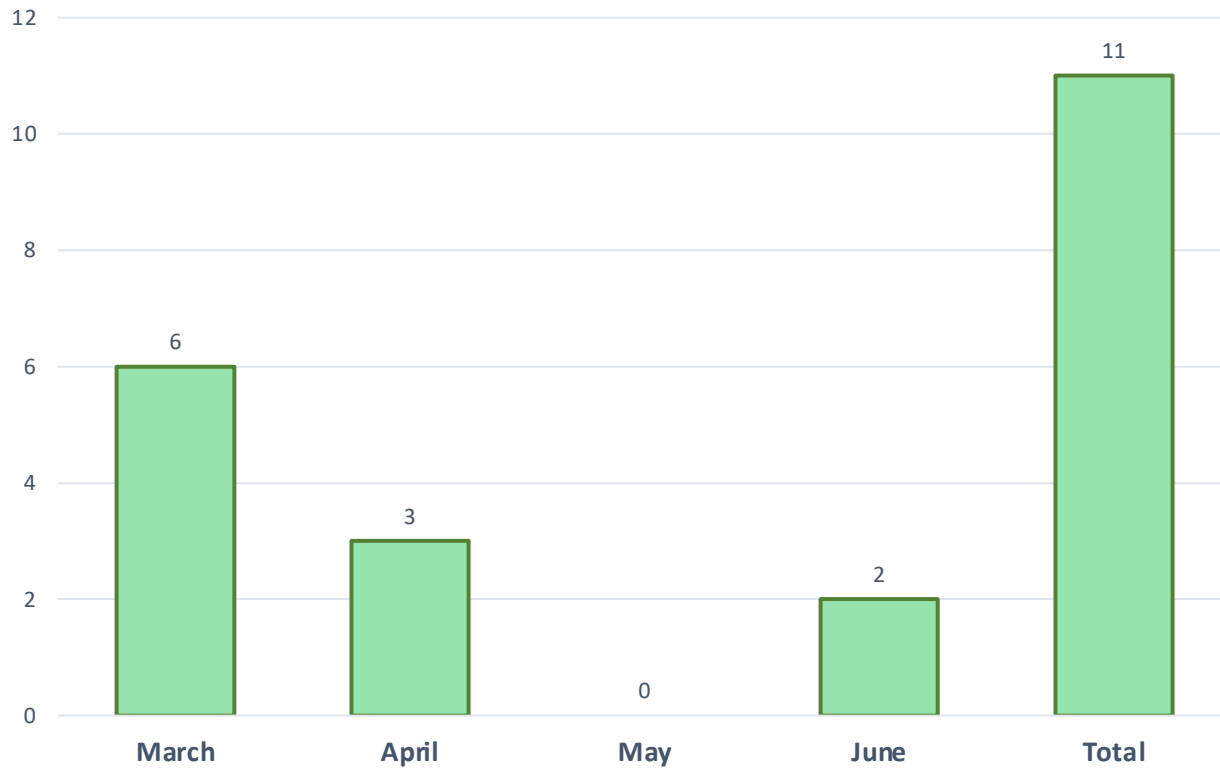


Reduction of mean LoS for post stroke dysphagia patients to 4.4 days

Morbidity	
Aspiration pneumonia	Nil
Mechanical Ventilation	Nil

Outpatient Service

Outpatient Dysphagia Rehabilitation Clinic March to June 2021



Dysphagia rehabilitation component included in stroke therapy care by physiotherapists and occupational therapists.

DISCUSSION

- Reduction in length of stay allowed substantial saving in economic expenditure for inpatient stroke care.
- The cost of stroke inpatient admission in another Malaysian university hospital in 2010 averaged to RM 931 per day (Aznida et al. 2012).
- Reduced morbidity with no post stroke aspiration pneumonia and prevention ICU admission.
- Coordination of dysphagia management allowed for successful transition to oral feeding among stroke patients.

CONCLUSION

- Establishment of post stroke dysphagia rehabilitation team has led successful patient outcome and benefit for hospital management.
- Coordinated multidisciplinary approach tailored to local resources is key in ensuring success for post stroke dysphagia management.

CHALLENGES

- COVID 19- disruption of services due to travel restrictions, work from home order.

ACKNOWLEDGEMENT

- Hospital Director, ORL-HNS Head for providing full support in the establishment of this service.