

## Rehabilitation Medicine Department

### Introduction and research highlights

Rehabilitation medicine department, Faculty of Medicine Ramathibodi Hospital provides tertiary care in rehabilitation field, from acute inpatient to outpatient. Dysphagia clinic was started since 2018 to provide more specific investigation, treatment and rehabilitation for patient with oropharyngeal dysphagia. Our main groups of patient are neurological dysphagia (i.e. stroke, Parkinson disease, and Alzheimer's disease) and structural and mechanical dysphagia (i.e. head and neck cancer).



**Figure 1.** Videofluoroscopic swallowing study is a modified barium swallowing study to evaluate oropharyngeal function regarding various bolus consistency.



Figure 2. Modified diet in accordance with International Dysphagia Diet standardization Initative (IDDSI)

### Research area I

#### **Developing Rehabilitation technique and treatment protocols**

Rehabilitation technique in oropharyngeal dysphagia comprises oropharyngeal exercises, stimulation, posture compensation and food modification. Applicability of these treatments depends on pathophysiology of diseases. For example, in patient with stroke, oral sensory stimulation and motor exercise to improve swallowing reflex and oral swallowing muscle power are crucial, while, in patient with head and neck cancer

List of research topics/ questions

- ▶ Incidence and prevalence of dysphagia in other neurological diseases
- ▶ Is there any modality to help improve recovery of swallowing function in stroke patient
- > Can new technology facilitate swallowing rehabilitation

### Research area II

#### **Developing modified diets**

Modified diet properties can enhances succession of swallowing rehabilitation in all types of patient. International Dysphagia Diet Standardization Initiatives (IDDSI) is standardization which easy to use not only by medical personal but also patient or caregiver themselves. Therefore, our team including physicians, dietitians and occupational therapists starts developed diet according to this standards, aim to improve QOL of oropharyngeal dysphagic patient.

List of research topics/ questions

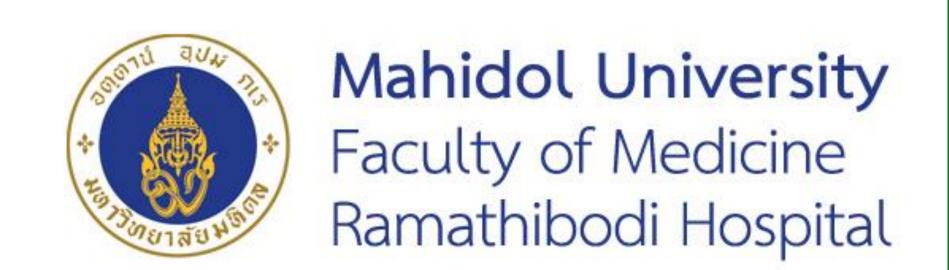
- > Proper food rheology for dysphagia patient

Contact

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# Department of Rehabilitation Medicine

## Research area I

#### **Pediatric Rehabilitation**

เป็น field ที่เกี่ยวกับการดูแลเด็กพิการด้วยโรคต่างๆ ที่ต้องอาศัยการฟื้นฟูสภาพหรือการฝึกทางเวชศาสตร์ฟื้นฟู ซึ่งนอกเหนือจาก ทางทีมที่ฝึกที่พญาไทแล้ว เรายังมีห้อง Multisensory room สำหรับ เด็กที่สถาบันการแพทย์จักรีฯ

List of research topics/ questions

- Cerebral Palsy
- Delayed development
- Neuromuscular disease
- Developmental Coordination Disorder

## Research area II

#### Intervention in rehabilitation

เป็นการสร้างสรรค์นวัตกรรมใหม่ๆที่ตอบโจทย์ painpoint ในการฟื้นฟู สภาพผู้ป่วย ในสถานการณ์ต่างๆ

List of research topics/ questions

- > VDO game for rehabilitation
- > Telerehab

## Research area III

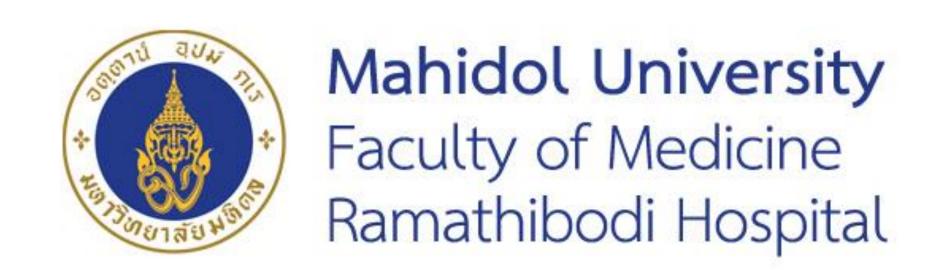
#### Health economics in rehabilitation

ศึกษาความคุ้มค่าของนวัตกรรมหรือเทคโนโลยีใหม่ๆ ที่ใช้ในทางเวชศาสตร์ฟื้นฟู ว่ามีความคุ้มค่าในทางเศรษฐศาสตร์หรือไม่

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# Rehabilitation Medicine Department

### Introduction and research highlights

Click here to insert your text .... (to explain about introduction to the department/center of excellence/program and research highlights/profiles that have been generated from the the department/center of excellence/program)

- Neurorehabilitation
- Rehabilitation technology
- □ Geriatric/Cardiac
- > Swallowing
- Prosthesis-Orthotics, foot clinic
- > Pediatric

### Research area I

We would like to study the gait pattern in patients with neurological disorder from wearable sensor.

Normal walking is one important indicator to represent people health status and ability to live independently.

To monitor how they walk in daily living would help the clinician to adjust the treatment program and monitor risk of falling. The first IMU device is an ankle bracelet sensor for people with Parkinson disease and combined with visual cue; laser guided to reduce freezing of gait and improve gait speed.

List of research topics/ questions

- □ Gait pattern
- wearable sensor.

### Research area II

Click here to insert your text .... (to introduce about the research problems and research goals in the second area of research)

List of research topics/ questions

- **.....**
- **.....**

# Research area III

Click here to insert your text .... (to introduce about the research problems and research goals in the third area of research)

List of research topics/ questions

### Research area IV

Click here to insert your text .... (to introduce about the research problems and research goals in the forth area of research)

List of research topics/ questions

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