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# A three pronged solution to improve workflow for ordering texture modified diets for patients with dysphagia



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## Introduction

Texture modification refers to the process of changing the consistency of food from regular diet to facilitate swallowing safety and reduce risk of choking. Two types of texture modified diets are available in KK Women's and Children's Hospital (KKH): easy chew diet and puree diet. These diets are commonly used in patients with swallowing difficulties, or dysphagia, following a swallowing assessment by a speech therapist. Errors in diet consistency can be dangerous for a patient with dysphagia because they pose as choking risks.

The order process which ensures that accurate orders are served according to recommendation is intricate in a paediatric acute hospital. It involves the different professionals including the Speech Therapy, Dietetics, Nursing and Catering staff.

## Problem

Retrospective patient data was collected from June to December 2015. Of all patients referred to Speech Therapy, 20.5% of patients required pureed diet while 11.4% required easy chew diet. We reviewed the diet served to these patients and computed an 18% error rate (18% of patients received the wrong consistency of diet from the speech therapists' recommendation). The food variety available for texture modified diets was also limited. There were 5 choices available for puree diets and 21 for easy chew diet.

There was also poor understanding of the existing workflow (Figure 1) involving texture modified diets.

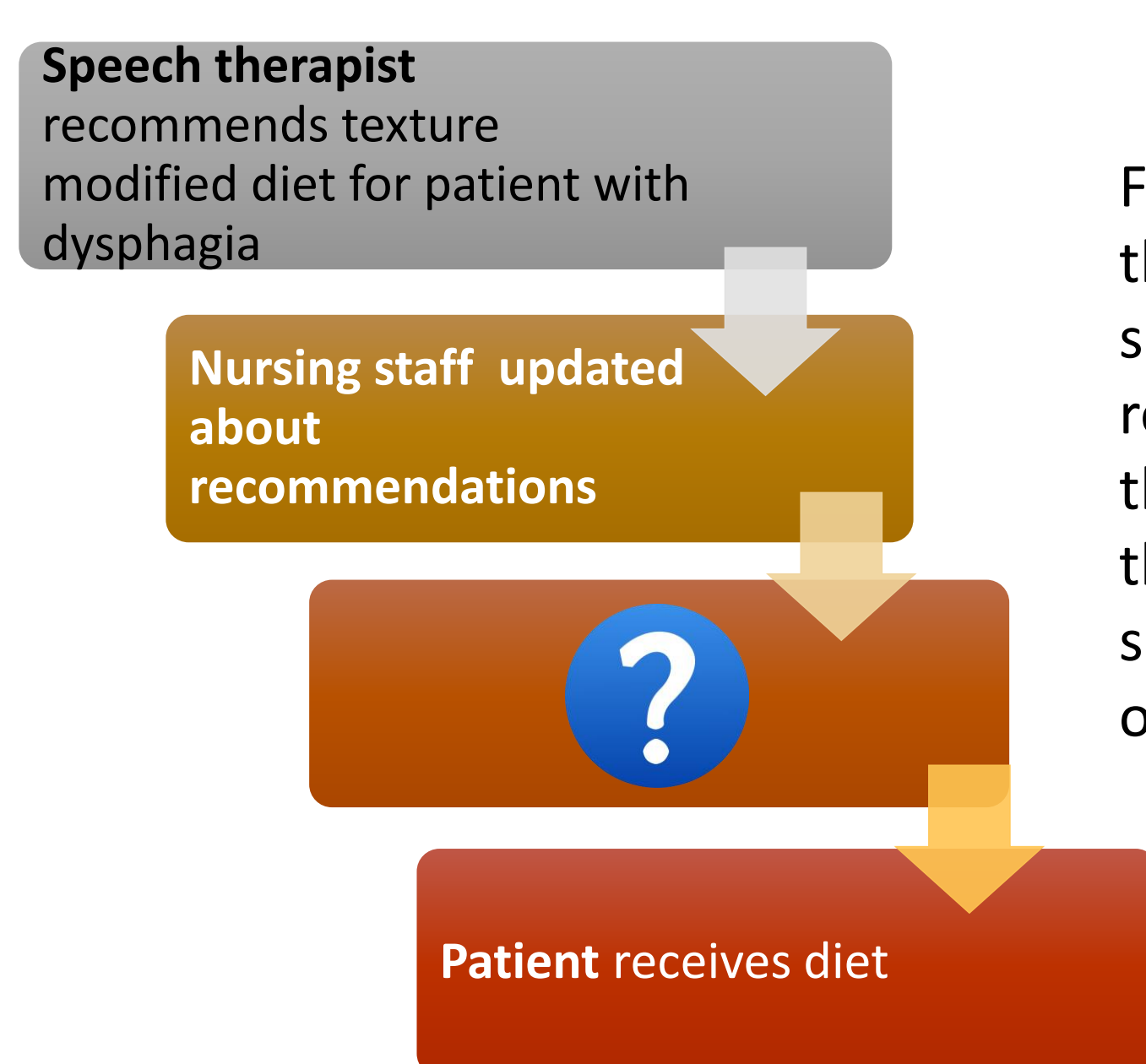


Figure 1. Pre-solution workflow from the Speech Therapy perspective. After speech therapists make their recommendations, they would relay the message to the nurse. Speech therapist were not aware of the subsequent workflow for the correct order to be served to the patient.

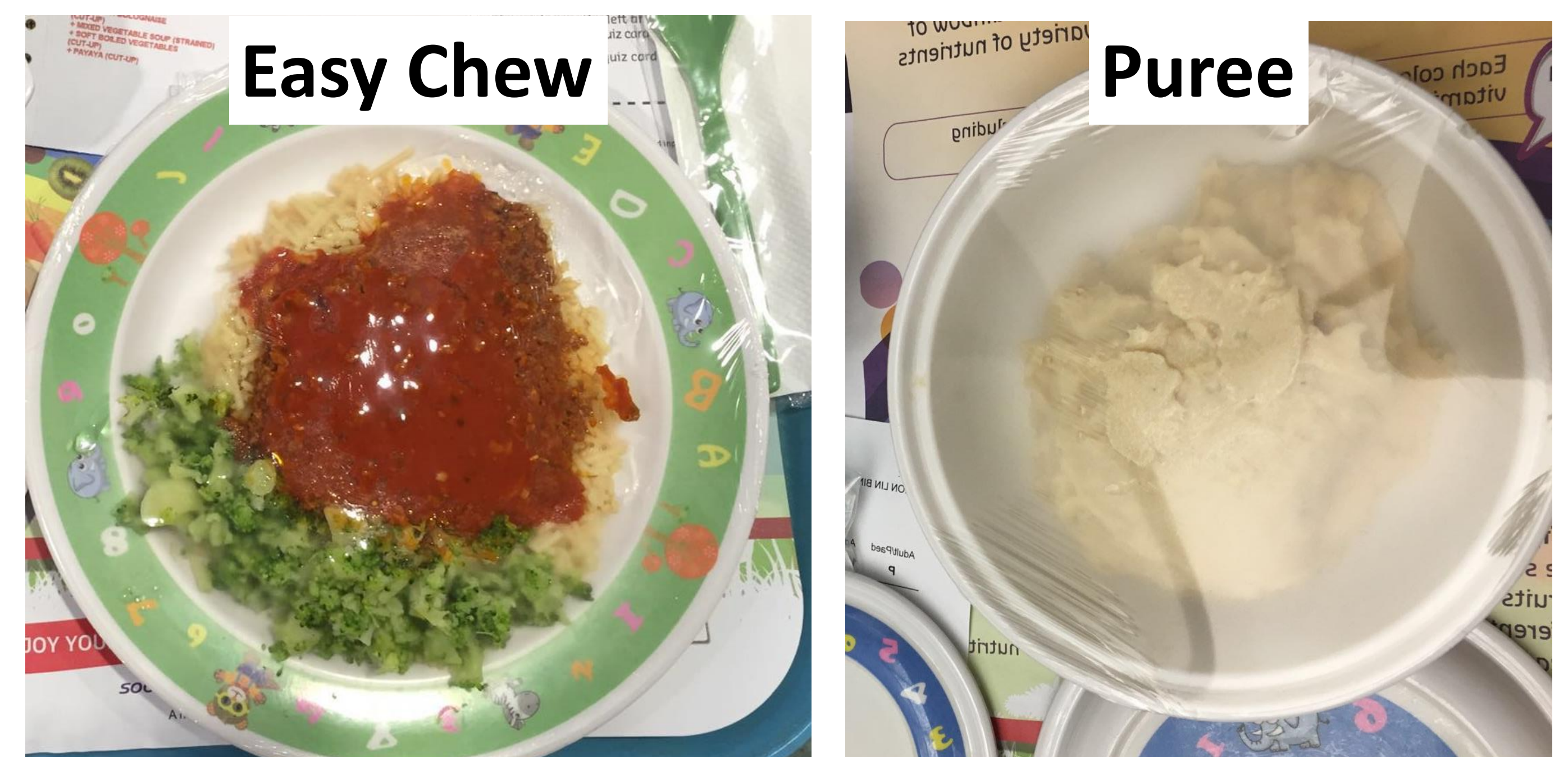


Figure 2. Sample of texture modified diets. Foods are prepared based on specific guidelines for the texture modification for patients with dysphagia.

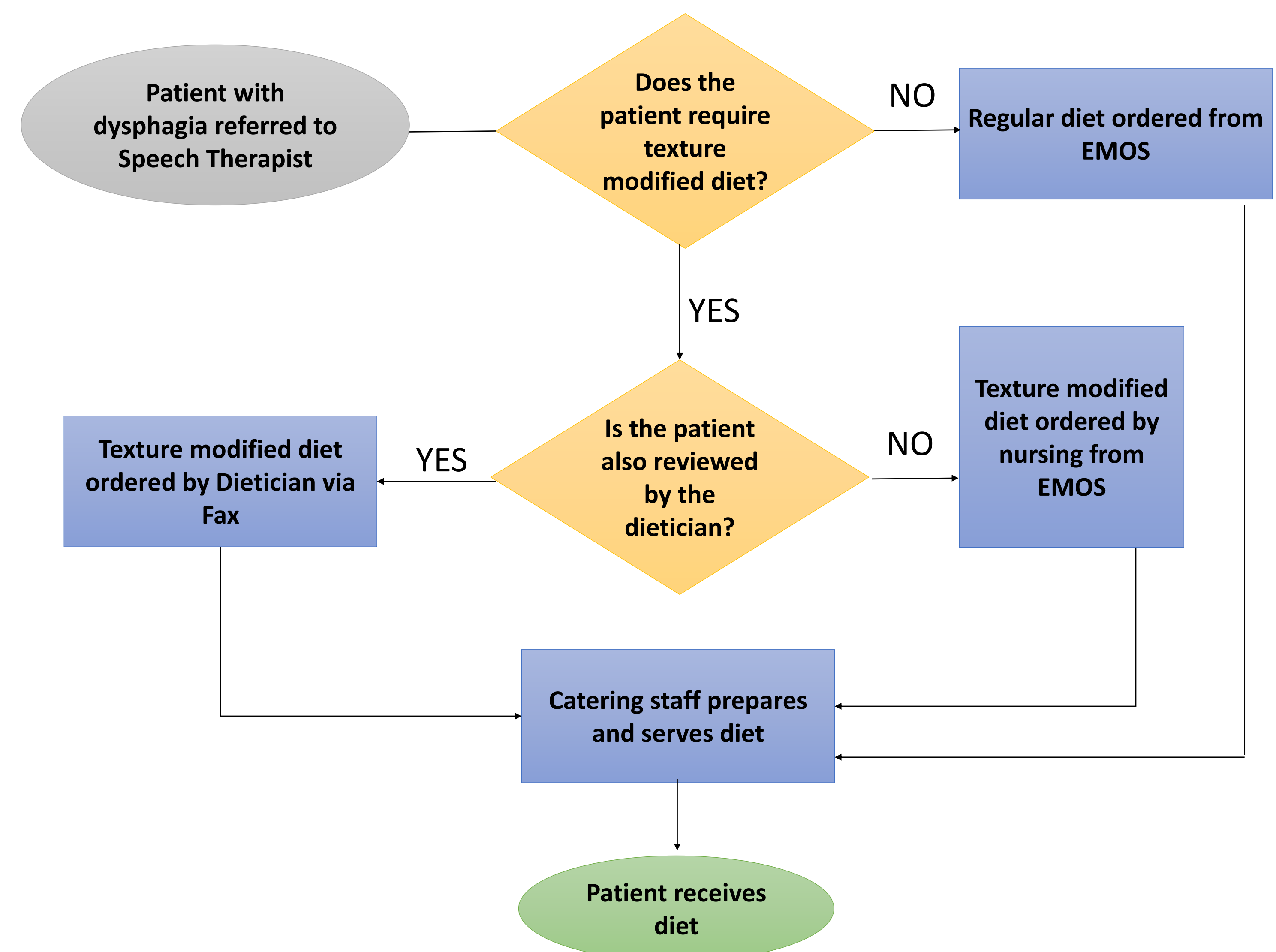


Figure 3. Refined workflow from the recommendation of texture modified diet by the speech therapists for patients with dysphagia to patient receiving diet.

## Aims

- To increase accuracy of texture modified diet orders served to patients with dysphagia
- To increase food variety for patients receiving textured modified diet (puree diet and easy chew diet)

## Solution

The **three pronged solution** was derived from a process improvement project. Speech Therapy Services, Catering and Dietetics came together to analyse the problem and brainstorm for a solution. The three pronged solution included:

- Modification of existing menus to achieve a new menu for two consistencies: puree and easy chew consistency (Figure 2),
- Clarification of workflow and terminology (Figure 3)
- Education of stakeholders (Speech Therapy, Dietetics, Nursing and Catering staff)

Post-solution error rates were determined for 2 weeks after the implementation of the solution.

## Outcomes

The outcomes of the project are as follows:

Targets	Outcomes	
	BEFORE Solution	AFTER Solution
Wrong consistency served	Error rate of 18.0%	Error rate of 9.1%
Number of items available for patients requiring (Pureed diet)	5	154
Number of items available for patients requiring (Easy Chew diet)	10	21

## Conclusion

Increased patient safety is ensured with the implementation of the solution. Increased food variety also improves the service quality for patients with dysphagia during their inpatient stay at KKH. Clarification of guidelines and continual education and communication between the stakeholders were paramount to the understanding of the problem. Greater understanding of the workflow and communication also enables stakeholders to effectively trouble shoot future meal errors and continuously improve on the workflow.