



Tan Tock Seng
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Prethickened beverages for patients with dysphagia

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Introduction

Dysphagia (swallowing difficulty) could result from diseases such as stroke, mouth or throat cancer, neurological disorders and dementia, amongst others. The diet and fluids of this group of patients may require modifications so as to manage aspiration risk. In Singapore, the different consistencies of fluids prepared for patients with dysphagia is commonly nectar-thick or honey-thick.

Literature has revealed that patients with dysphagia are frequently dehydrated. Cichero (2013) shared that this is likely due to various factors such as volume of thickened fluids consumed, thirst quenching ability, flavour of thickened fluids and insufficient access to thickened fluids. Whelan (2001) further reinforced that one of the contributor to lack of oral intake of fluids is patients' dependency on nurses to provide thickened fluids.

The development of locally-flavoured pre-thickened beverages (PB) aims to target the two most significant gaps, namely the insufficient access to thickened fluids as well as the lack of flavours of thickened fluids. Thus increasing fluid intake for patient to improve hydration level and their quality of life.



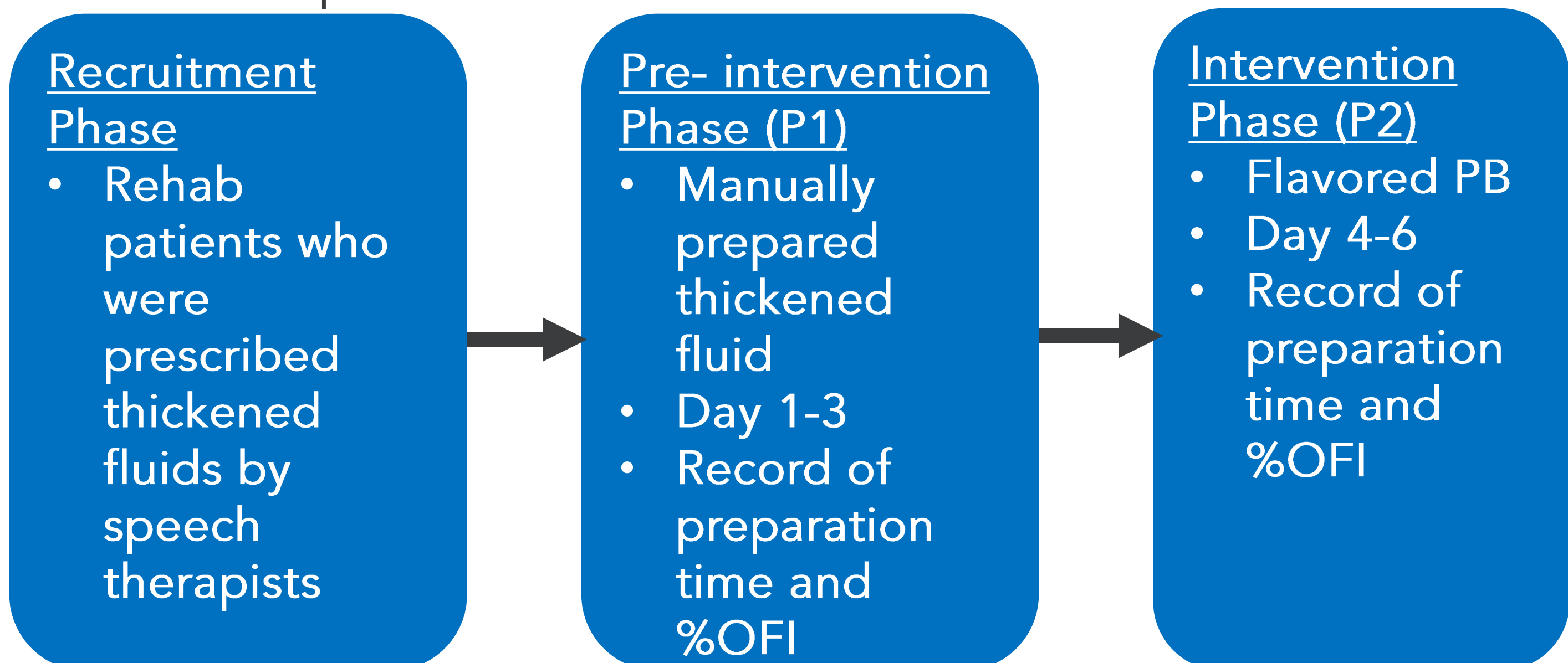
Figure 1: Locally-favored PB Honey thick (left) and Nectar thick (right)



Figure 2: All locally-favored PB

Methodology

Patients' oral fluid intake was tracked for 3 consecutive days during tea-break, one point at pre-intervention phase (P1) where nurses manually prepared the thickened fluids and another, during intervention phase (P2) where locally-flavored PB was used. The tracked amount of oral fluid intake was expressed as a percentage of total oral fluid intake (%OFI) and analyzed with simple t-test. Preparation time (sec) and accuracy of consistencies prepared by nurses were recorded. Qualitative feedback regarding accessibility, preparation ease, and palatability of fluids were also collected from patients after the intervention period.

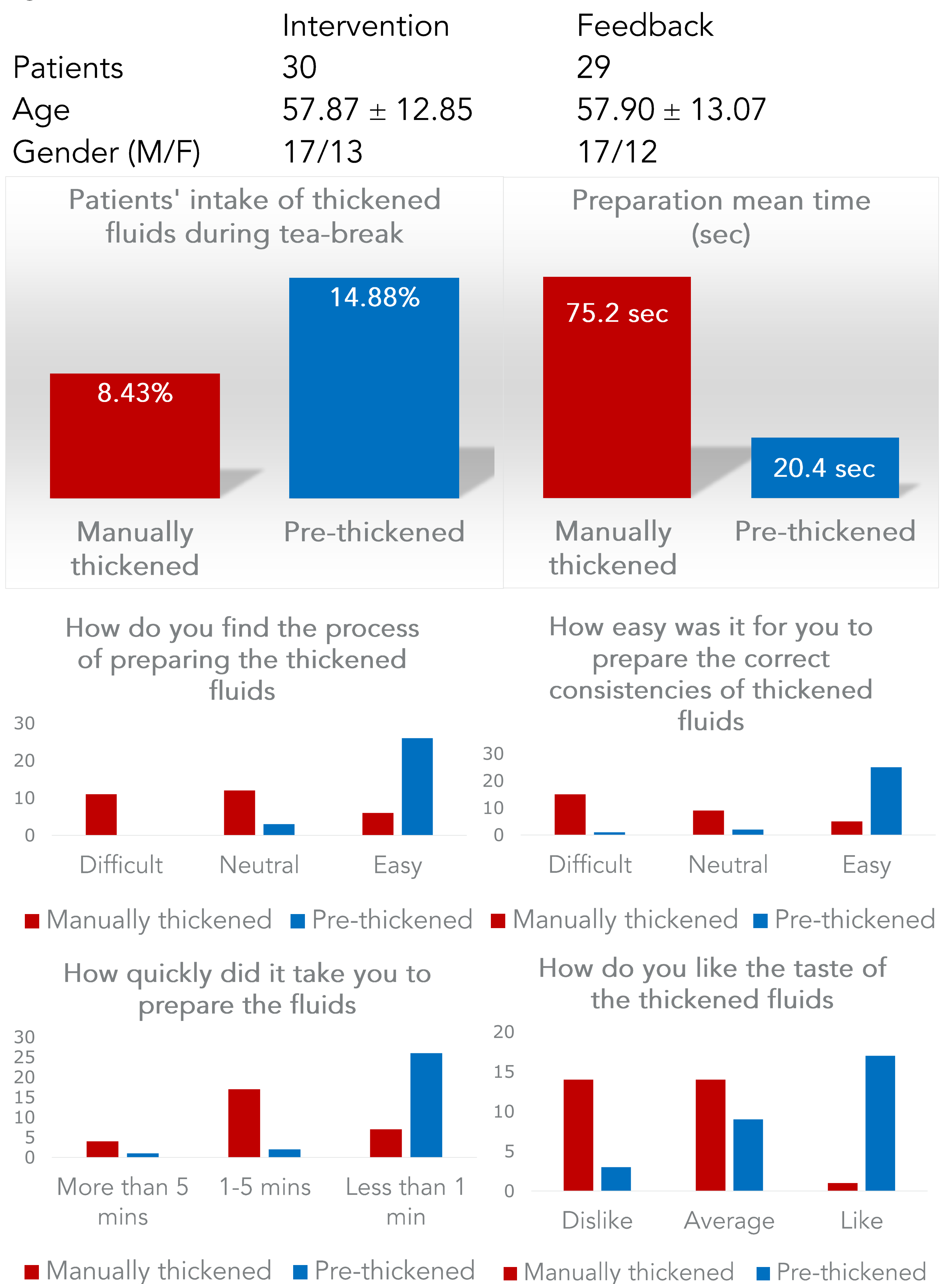


Reference

- Cichero, JAY. (2013) Thickening agents used for dysphagia management: effect on bioavailability of water, medication and feedings of satiety. Nutrition Journal 12(54)
- Whelan, K. (2001) Inadequate fluid intakes in dysphagic acute stroke. Clinical Nutrition 20(5), 423-4283.

Results

Patient %OFI (n=30) increases from a mean intake of 8.43% (P1) to 14.88% (P2) (t[29] = 6, p<0.05). There was also a significant decrease in nurses fluid preparation time (n=5) with mean value of 75.2 sec (P1) to 20.4 sec (P2) (t[4]=6.6, p<0.05). At P2, all fluid consistency was accurate with less than 1-minute preparation time whereas at P1, inaccurate consistencies were prepared and more time was required. Feedback received are highly positive towards PB and most patient like the taste of the PB that was given to them.



Results

The use of PB leads to increase in patients' oral fluid intake hence improving hydration level. It also provides greater ease and halved the preparation time. This potential standard practice can minimize errors and maximize efficiency where caregivers can focus on other major duties. With its ease of preparation and dispensing, further cost saving can be achieved through organizational job re-design. The team is working towards listing these PB as commercial products to increase accessibility in the community via vending machines and supermarkets.

