

### **Process Flow from Meal Order to Food Service:**

1. Assessment & Recommendations: Safe level of diet texture and fluid consistency recommended for each patient based on clinical assessment, medical condition and history, and patient preferences
2. Meal Ordering: Based on specified recommendations, individualised meal orders are made via the institution's meal ordering system
3. Kitchen receives meal orders
4. Food Preparation and Cooking: Kitchen staff prepare ingredients and cooks a variety of dishes according to recipes
5. Food Processing: Cooked food is further processed to the various texture levels
6. Plating: Meal trays are plated according to meal orders
7. Food Service: Meal trays sent up to wards and served to patient

Trained food service staff are tasked with checking the accuracy of food texture daily at each meal preparation (i.e. breakfast, lunch, dinner) with monthly team audits by the hospital chef, dietitians and speech therapists to ensure that food service staff continue to be aligned with texture standards. Audit checks on food textures are very time consuming, up to 30 minutes to 2 hours daily. These manhours can potentially be directed to address other healthcare needs.

There are also various shortcomings and challenges faced in use of visual identification and IDDSI test methods due to the varied nature and properties of food and fluids. For example, repeated testing is required on a fluid sample to obtain an average reading for the syringe flow test which is time-consuming. Poor technique with the syringe flow test may result in inaccurate readings (i.e. human reaction time, bubble formation, etc). In addition, with the use of powder-based liquid thickeners added into drinks, poor solubility of the thickener may also result in inaccurate readings due to clogging of the syringe tip.

For diet, it can be time consuming to test a large number of dishes and usually more than one IDDSI test method is required per food sample to ensure that the texture meets IDDSI standards. Moreover, there is still a degree of subjectivity involved in determining the test results. The time-consuming nature of these standardized food texture and fluid consistency testing methods can also lead to the reduced willingness for food preparation staff or caregivers to use these methods for regular monitoring of the food/fluids prepared, further resulting to more subjectivity when they attempt to monitor food/fluids prepared using their own modified methods or just visually.

Poorly prepared food textures and fluid consistencies can contribute to potential risks of aspiration and choking, which can result in hospital readmissions for pneumonia and drive up healthcare costs. In addition, given the subjectivity of the current food texture testing methods and possible reduced compliance to the standardised methods of testing especially in a mass production kitchen, inaccurate and poorly prepared food textures may not be picked up in time. If the errors in food textures prepared are picked up late, it may require re-preparation of food contributing to increase in hospital operational costs.