Innovation for Aging Population

Disruptive Food Innovation Challenges - Creating Safer and Personalized Puree Meals with 3D Food Printing

Biography

Ms. Gladys Wong is currently the Senior Principal Dietitian at Khoo Teck Puat Hospital (KTPH), Singapore. She relinquished her 17-year headship of Nutrition & Dietetics Department at KTPH at the end of 2017 to concentrate on dietetic placement education, community and geriatric dietetics, and special projects pertaining to health promotion and sustainability. Ms. Wong is a New Zealand (NZ) Registered Dietitian and Accredited Dietitian of Singapore Nutrition & Dietetics Association (SNDA). She trained and worked as a Dietitian in NZ before relocating to Singapore in 1995 to pioneer the nutrition diploma course at Temasek Polytechnic. She then returned to clinical/fooodservice dietetics in 2000. Ms. Wong is a Member of SNDA since 1985 and served as President, Treasurer, Membership Sub-Chair for numerous terms. She is an affiliated member of Foodservice Consultants Society International. She was also Chair of Dietetics Panel with Ministry of Health, Singapore and is currently a Member of National Diabetes Prevention & Care Task Force. Ms. Wong is a prolific speaker who has delivered countless professional public talks and workshops relating to a wide variety of nutrition-related topics. Her latest project is towards developing a commercially viable food supply model using 3D food printing to produce consistent, nutritious and personalised puree meals for patients with swallowing difficulties. Ms. Wong was awarded B.Sc. (Hons) and M.Sc. (Human Nutrition) from University of Otago, NZ.

Abstract

The silver generation is living longer in sickness and in health. WHO and respective countries have various strategies and action plans on how to tackle this aging issue, such as fall prevention, nursing home care, and nutritional assessments to identify the malnourished. Parallel, dietitians and food industries are also finding ways to feed a subset of this population with chewing and swallowing difficulties. Such fortified foods of various safe consistency are often unpalatable or visually unappealing, otherwise, manpower intensive to do otherwise.

This poses the challenges on how to produce consistent mass production of consistent textured puree foods for people with dysphagia. Exploiting technology, 3D food printing could be a commercially viable solution. This can be a disruptive food innovation to creating consistently safer and personalized puree meals for our elderly population with dignified care. Other challenges will include involving numerous stakeholders such as the food technologists, engineers, transportation, packaging, rethermalizing technology, etc. to manufacture palatable and printable food inks with stable and safe shelf life, etc.

This presentation will present the global challenges that dietitians in clinical practice, food service and community may face when managing the patient with dysphagia, from assessment to production to the mouth; explain about the status of 3D Food printing overseas and in Asia, and how 3D Food printing may be the food service of the future for the aging population.