

University: The University of Hong Kong (HKU)
Unit of Assessment (UoA): Education
Faculty: Education
Title of case study: Care for you – Carefood Project
Has this case study been submitted for RAE 2020? (Y/N) N
Will this case study be submitted for RAE 2026? (Y/N) N
Is this case study <u>continued</u> from a case study submitted in RAE 2020? (Y/N) (if yes, please provide clear evidence of the manner and extent to which the development of the impact expands its scope beyond that presented in the previously submitted impact case study in RAE 2020.) No
1. Summary of the impact (indicative maximum 100 words) Studies indicate that approximately 15% of community-dwelling older adults (Madhaven et al, 2016) and 60% of nursing home residents experience different levels of swallowing difficulties (Pu et al., 2017). To ensure swallow safety, modified diet (also known as ‘care food’) is often prescribed. Careful and standardized preparation of care food is essential for patient safety. However, prior to this, no industry-wide standards existed to guide production of care food. Prof. Karen Chan and other local partners, established a set of food texture standards that are now widely adopted across the care food industry in Hong Kong, including food manufacturers, fast food restaurant chains, restaurants and nursing homes. The standards are also adapted as the Greater Bay Area Standards.
2. Underpinning research (indicative maximum 500 words) Two series of studies led by Prof. Karen Chan laid the research foundation for the impact project. The first one was a Public Policy Fund project (2012-2015) and a PhD project supervised by Prof. Chan (2015-2029) that investigated the prevalence and risk factors associated with swallowing difficulties in older adults. These two projects identified the prevalence of swallowing difficulties in Hong Kong and associated factors that increased the risk of aspiration in the older adults. The second study was a project funded by the Hong Kong Council of Social Service (2020-2022) that focused on developing quantitative textural and rheological data for texture modified food and drinks. This study established the reference data that is included in the Hong Kong Care Food standards. The Public Policy Fund project was the first study in Hong Kong to provide evidence to policy makers to support the creation of speech therapist positions for elderly service units. Swallowing screening was conducted in 42 local aged care facilities and 878 older adults were screened. This study found that up to 70% of the participants were on modified diet. Further in-depth study

recruited 291 older adults for full swallowing assessment and 70 of them were re-assessed after 6-12 months. The second study found that older adults who had reduced cognitive functions, poor swallowing-related muscle functions and those who required feeding assistance had an increased risk of aspiration, which may subsequently lead to aspiration pneumonia, malnutrition and fatal choking incidents. This series of studies emphasized the importance of providing adequate training and support to improve swallow safety for older adults, especially at nursing homes.

The second study on Care food standards development was jointly conducted by Prof. Karen Chan and the Food Research Centre, CUHK, funded by the Hong Kong Council of Social Service. The study aims to establish reference data on food texture and rheological properties for describing and preparing texture modified food and drinks for individuals with swallowing difficulties. The study identified 60 common local food ingredients and dishes and each sample was prepared according to the International Dysphagia Diet Standardisation Initiative (IDDSI) framework. IDDSI was established in 2013 and its framework is an international movement to standardize the description and testing methods of texture modified food and drink to ensure swallow safety of those in need. The food texture and rheological properties of foods and drinks at each IDDSI level were obtained in the study and was adopted as the reference data for the Hong Kong Care Food Standards.

3. Period when the underpinning research was undertaken:

The first series of studies were conducted from 2012 to 2019, while the second study was conducted in 2020-2022.

4. References to the research (indicative maximum of six references)

Pu, D., Murry, T., Wong, M.C.M., Yiu, E.M.L. & Chan, K.M.K. (2017). Indicators of dysphagia in aged care facilities. *Journal of Speech, Language, and Hearing Research*, 60 (9), 2416-2426.

Pu, D., Yiu, E.M.L., Chan, K.M.K. (2020). Factors associated with signs of aspiration in older adults: A prospective study. *Geriatric Nursing*, 41(5), 635-640.

Wong, M.C., Chan, K.M.K., Wong, T.T., Tang, H.W., Chung, H.Y., Kwan, H.S. (2023). Quantitative Textural and Rheological Data on Different Levels of Texture-Modified Food and Thickened Liquids Classified Using the International Dysphagia Diet Standardisation Initiative (IDDSI) Guideline. *Foods*. 12(20):3765. <https://doi.org/10.3390/foods12203765>

5. Details of the impact (indicative maximum 750 words)

The IDDSI framework is professionally recognized and implemented in many countries, including U.S.A., U.K., Australia, Canada, and Singapore. Prof. Karen Chan is the co-chair of the Hong Kong IDDSI Reference Group who led the working group that developed the Traditional Chinese IDDSI documents, which are officially available from the IDDSI Global website and adapted by Chinese speaking populations worldwide (source 1 & 2 in section 6). The quantitative texture and rheological data from the study (Wong et al., 2023), together with the Traditional Chinese IDDSI framework, were adapted to support the Care Food Standards developed by the Hong Kong Council of Social Service (source 3 & 4).

The Care Food Standard Guidelines, published by the Hong Kong Council of Social Service was released to the public in 2023. The Guidelines facilitated the implementation of IDDSI at healthcare settings, especially at nursing homes. Care food manufacturers also follow the guidelines for product testing and labelling their products according to the IDDSI levels. The standardized labelling allow individuals with swallowing difficulties to easily identify care food products that are suitable for their swallowing needs.

Recently, Prof. Chan led a project funded by The Hong Kong Exchange Foundation, to support the development of frozen care food products. The project is in collaboration with the Hong Kong Council of Social Service and one of the largest fast food chain in Hong Kong (Fairwood). The aim of the project is to establish standard operating procedures for mass production of frozen care food. Prof. Chan and her team provided training to Fairwood and assisted in validating their care food products with the Care Food Guidelines. Fairwood was the first fast-food chain to offer ready-to-eat care food products in Hong Kong (source 11). A number of major restaurant chains have since followed to develop more care food products (e.g., Café de Coral and Maxims). Prof. Chan and her team is currently investigating whether the provision of frozen care food may help to release the manpower burden and improve the quality care and nutrition of residents at nursing homes. The standard operating procedures is targeted to be released to the public by end of 2025.

Following the successful development of the Care Food Guidelines and increased awareness of swallowing disorders and care food in Hong Kong, the Guidelines were recently adapted and adopted as the Greater Bay Area (GBA) Standard. Prof. Chan is one of the members of the drafting committee of the GBA standard for the ‘General Requirements of Dysphagia Diet for Elderly (Care Food)’. The GBA standard have included the quantitative texture and rheological data developed by Prof. Chan and her team (Wong et al., 2023) (source 13 and 14). The GBA standard provides clear guidelines for care food manufacturers in the Greater Bay Area and allows better health care quality for individuals with swallowing difficulties. This is a timely standard as cross-border elderly care in the Greater Bay Area is gaining popularity. With the implementation of the Care Food Guidelines in the Geater Bay Area, Hong Kong elderlies with diagnosed swallowing difficulties may now continue to receive the appropriate care food level when they move to elderly facilities in the GBA. Currently, Prof. Chan is the vice-chairperson of the Taskforce on Care Food Product Certification at the Hong Kong Council of Social Service. The Taskforce is responsible for developing a certification scheme for Care Food products in Hong Kong. It is anticipated that the scheme will be launched by end of 2026.

Prof. Chan’s research and knowledge exchange projects in swallowing management and care food standards have laid the foundation of the establishment of care food standards in Hong Kong and in the Greater Bay Area. Prof. Chan’s work has made significant impact on the care food industry and created safer and higher quality care for individuals with swallowing difficulties.

6. Sources to corroborate the impact (indicative maximum of 10 references)

Published IDDSI framework and Care Food Standards (with references made to acknowledge contribution by Prof. Karen Chan and Swallowing Research Lab, HKU)

1. <https://www.iddsi.org/images/Publications-Resources/DetailedDefnTestMethods/ChineseTrad/V2DetailedDefnTradChineseFeb2021.PDF>

2. <https://www.youtube.com/playlist?list=PLa8-lAnKo0KaWIuhQpIHL7IqhN-CunsrW>
3. <https://www.carefood.org.hk/%E7%85%A7%E8%AD%B7%E9%A3%9F%E6%A8%99%E6%BA%96%E6%8C%87%E5%BC%95>
4. <https://www.carefood.org.hk/%E5%B0%88%E8%B2%AC%E5%B0%8F%E7%B5%84%E5%90%8D%E5%96%AE>

Media coverage (selected) and public engagement activities:

5. <https://shorturl.at/wRc3R> (7.2022 Consumer's Council monthly magazine)
6. <https://shorturl.at/cHUqO> (24/9/2024 topick.hket.com)
7. <https://www.facebook.com/iddsi.hongkong> (Hong Kong IDDSI Symposium)
8. <https://shorturl.at/iw3eS> (8/9/2024 Singtao)
9. <https://shorturl.at/5qk3o> (20/1/2025 Mingpao)
10. <https://youtu.be/OhHtocX9lb4?si=5yI1UC-oMOSnfn3> (27/2/2025 鏗鏘集)
11. <https://www.fairwood.com.hk/articles/23> (Care Food products at Fairwood)
12. <https://shorturl.at/bRZNG> (5/3/2025 HKEJ 信報)
13. <https://www.hkcss.org.hk/care-food-gba-standard-officially-promulgated-foundation-for-standardization-of-care-food-products-and-development-of-the-silver-economy-in-the-guangdong-hong-kong-macao-region/?lang=en> (GBA standards press release)