Nutrition and quality food standards for adults in Victorian public hospitals and residential aged care services

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Contents

Acknowledgements

Steering committee and project team members

The Victorian Department of Health commissioned the Alfred Health Nutrition Department to update the 2009 *Nutrition standards for menu items in Victorian hospitals and residential aged care facilities*. Alfred Health assembled a team of dietitians, who undertook a comprehensive literature review and extensive consultation to develop this document.

The project team included:

- Professor Ibolya Nyulasi – Manager, Nutrition Department, Alfred Health
- Suzannah Jackson – Strategic Project Lead
- Aleksandra Warzel – Project Lead
- Katherine Muller and Tracey Lamb – Project Officers.

A steering committee was established, with members selected based on expertise and experience in health service food service management, to provide expert opinion and guidance in developing these Standards. Several members were participants in developing the 2009 Standards (marked*), and their key role and contribution to introducing the concepts of banding is gratefully acknowledged.

Steering committee membership and roles are:

- Ibolya Nyulasi* – chair (Manager, Nutrition and Dietetics, Alfred Health)
- Suzannah Jackson – secretariat (Dietitian, Alfred Health)
- Robert Anderson* – food service representative (Manager, Medichef Central Production Kitchen)
- Vicki Barrington* – metropolitan dietetic representative (Food Service Dietitian, Western Health)
- Tara Buratto – metropolitan dietetic representative (Food Service Dietitian, Northern Health)
- Jemma Bear – speech pathology representative (Clinical Speech Pathologist, Alfred Health)
- Samantha Conole – metropolitan food services representative (Non-Clinical Support Services Manager, Alfred Health)
- Kathy Faulkner – Paediatric Standards project representative (Food Service Dietitian, The Royal Children's Hospital)
- Virginia Fox – regional/rural dietetic representative (Nutrition and Dietetics Manager, Bendigo Health)
- Imran Hanif* – food service representative (Manager, Monash Central Production Kitchen)
- John Hawker – consumer representative (Alfred Health)
- Nicole Jones – regional/rural dietetic representative (Manager, Dietetic and Diabetes Services / Food Service Dietitian, Northeast Health, Wangaratta)
- James Lee – HealthShare Victoria representative
- Elise Mulcahy – regional/rural dietetic representative (Manager, Nutrition and Dietetics, Echuca Regional Health)
- Kelly Neville – Department of Health representative (Senior Policy Officer – Nutrition, Department of Health)
- Lisa Sossen – metropolitan aged care dietetic representative
- Kathryn Toohey – subject matter lead – disability representative (Dietitians Australia).

Veronica Graham, State Public Health Nutritionist/Accredited Practising Dietitian, Department of Health provided statewide oversight and final nutrition content endorsement of these Standards.

Working groups

In addition to steering committee meetings, working group meetings were held to scope relevant setting-specific considerations to guide further progression of the literature review and the format and content of this document. Three working group meetings were held, and the additional contribution of expertise from the steering committee is acknowledged. Working groups were:

- **Food Quality Aspects, Monitoring and Governance:** Vicki Barrington, Kathy Faulkner, Imran Hanif, Kathryn Toohey
- **Food Service Provision in Public Sector Residential Aged Care Homes:** Lisa Sossen, Virginia Fox, Tara Buratto
- **Food Service Provision in Public Rural and Regional Health Services:** Nicole Jones, Elise Mulcahy.

Knowledge input group

A Knowledge Input Group was also established, with a meeting held with food service dietitians in New South Wales to understand considerations for implementing the International Dysphagia Diet Standardisation Initiative (IDDSI) Framework and developing statewide food and nutrition standards. This group included:

- Melanie Schier – Agency for Clinical Innovation, NSW
- Shannon Singh – HealthShare NSW
- Dallas Demeny – HealthShare NSW.

Wider sector consultation

We gratefully acknowledge the participation, contribution and expertise of the health services, peak bodies and consumer engagement representatives who provided feedback on this document. An expression of interest was extended to all Victorian public sector health services. Targeted wider sector consultation was completed with state and national peak bodies working in the nutrition, speech pathology, aged care, hospitality, and consumer engagement sectors. Surveys were circulated to the health services, peak bodies and consumer engagement representatives who had expressed interest in providing feedback. Questions focused on the layout, format, content, and feasibility of implementing recommendations from this document. Feedback was collated, then considered by the project team and Department of Health and incorporated into this document as relevant.

Introduction to these Standards

Purpose and background

The purpose of the *Nutrition and quality food standards for adults in Victorian public hospitals and residential aged care services* (these Standards) is to provide a framework for providing food and nutrients to people who have been admitted to public hospitals ('hospitals') or who live in public sector residential aged care services (PSRACS) across Victoria. (Hospitals and PSRACS are jointly referred to as 'health services' in this document.)

There are existing nutrition standards that hospitals are required to follow, which the then Victorian Department of Human Services published in 2009. This document updates the 2009 Standards to align with best evidence-based practice sourced from documented research, national and international publications and population health guidelines. In addition, other states'/territories' nutrition standards were considered to promote consistency where possible.

It is vitally important that food provided in health services is nutritionally adequate, appealing and enjoyable. This is to optimise oral intake to meet the increased nutritional requirements of patients and residents in the context of disease and recovery, and to maintain quality of life and wellbeing. Menus should align with the Australian Dietary Guidelines (ADG's)[90] and evidence-based practice.

This document is structured to support health services in achieving these goals by outlining:

- guiding principles that underpin these Standards
- an evidence-based rationale that outlines the contemporary literature used to guide development of these Standards that is relevant for all health services (section 1)
- an evidence-based rationale specific to developing the baseline diet in health services (section 2)
- the Standards (section 3)
- nutrient banding and minimum menu choices (section 4)
- the menu planning and review cycle (section 5).

The appendices provide practical resources to undertake menu planning activities.

Throughout this document, '**these** Standards' is used to describe this complete document, encompassing the best practice Standards, plus the Nutrient banding and minimum menu choice tables whereas '**the** Standards' refers to the specific recommended best practice standards in Section 3.

Compliance with these processes and technical recommendations underpins clinically safe and effective food service systems to build menus that can meet these Standards. Critical to this process is assessing a health service's population, with targeted menu planning to meet nutritional and cultural needs through variety and choice. Continuous quality improvement (CQI) should occur while including patients/residents in these processes wherever possible.

Intended audience

Implementation and monitoring of these Standards is a collaborative undertaking. This document is designed for those involved in planning, developing, procuring, preparing, providing and evaluating foods, fluids and menus for health services.

This includes, but is not limited to:

- chefs/cooks
- food service managers
- food service dietitians
- central production kitchen (CPK) managers
- food manufacturers
- contract and procurement managers
- health service managers.

This document provides practical steps to ensure health services meet these Standards. It also offers a framework for CQI processes for those responsible for quality standards and improvement at all levels of the organisation.

Food service dietitians hold a unique skill set underpinned by both clinical nutrition knowledge and experience across health services' food service systems. As such, they are key personnel in providing oversight and governance in implementing these Standards in any health service.

Scope

- These Standards apply to adults admitted into hospitals in Victoria, including day case patients, and those living in PSRACS. In-home aged care services, disability support services and mental health hospitals are not within scope of this document.
- Texture modified (TM) foods and fluids are within scope of these Standards and are subject to the same principles of nutrient banding and minimum menu choice.
- Paediatric patients admitted to adult hospitals are not within scope of this document. For these patients, please refer to the *Nutrition and quality food standards for paediatric patients in Victorian hospitals*.
- This document does not provide a framework for delivering diets for specific medical and clinical conditions and independent patient/resident choice, commonly referred to as therapeutic diets. Some diets such as vegan or TM vegetarian diets can fail in meeting nutritional needs in a health service. Dietitians should work collaboratively with the food services and speech pathology departments to ensure special diet codes align with best practice research, optimising nutrition and clinical outcomes.
- Food procurement is not covered in this document. HealthShare Victoria facilitates health service access to consumable goods via its catering supplies contract. Health service procurement is conducted in compliance with organisational food procurement policies and HealthShare Victoria's health purchasing policies.
- It is not within the scope of this document to address food brought from home or external delivery services for patients/residents. This should be addressed by health services' food safety policies and processes.
- It is not within the scope of this document to address food produced by Meals on Wheels. This is addressed by the *National meal guidelines* produced by Meals on Wheels Australia.[1]
- Food service managers in health services should consider the wider social responsibility of working in a health-promoting environment.[2] Separate policies and guidelines exist for catering and retail food environments and are not within the scope of this document.

Guiding principles

The following statements have guided the development of these Standards:

- align with relevant national and international quality frameworks
- establish CQI processes
- ensure food provided is adequate and safe
- prevent malnutrition through the Food First approach
- align with the ADGs[90]
- embrace the cultural and social aspects of food
- optimise menu choice, variety and the meal experience
- improve food quality – specifically, presentation, taste and appearance
- ensure high-quality food service is embedded as part of clinical health care
- endorse sustainable food service and waste reduction strategies
- promote sourcing and procuring local/Victorian foods and ingredients where possible
- engage patients and residents in menu design, planning and CQI processes.

1. Background and rationale – all health services

1. Background and rationale – all health services

The background and rationale for these Standards is outlined in sections 1 and 2 and refers to evidence justification for the Standards, nutrient banding and minimum menu choice outlined in sections 3 and 4.

1.1 Quality frameworks

Hospitals

All hospitals are required to be accredited to the National Safety and Quality Health Service (NSQHS) Standards, which aim to protect the public from harm and improve the quality of health service provision.[3] These Standards align with three key NSQHS Standards:

- Clinical Governance Standard
- Partnering with Consumers Standard
- Comprehensive Care Standard.

The NSQHS Standards address the following areas for patients in hospitals:[3]

- Meals and menus reflect the nutritional requirements appropriate for the patients receiving care.
- Psychosocial, cultural, and religious needs are considered in meal and menu planning.
- Food and fluids are appealing, and patients enjoy them.
- The food service system, meals and menus are relevant to length of stay and frequent readmissions.
- Flexible meal timing and service arrangements are considered.
- Patients, their families, and carers are consulted in food planning and evaluating systems, processes, and quality.
- Patients are offered help with eating and drinking where required.
- Dietitians are consulted if patients:
  - have, or are at risk of, malnutrition
  - have special dietary needs associated with a medical condition.

A key message within the NSQHS Standards is to 'ensure that ordering and delivery processes support the right foods and fluids being delivered to the right patient at the right time'.[3] This should be met through CQI processes, as depicted in section 3, involving patients and/or their families/carers.

Implementing these Standards will support hospitals in meeting the relevant NSQHS Standards relating to nutritional care, menu planning, consumer partnership and choice.

Public sector residential aged care services

Respecting dignity, autonomy and choice when providing a food service improves resident satisfaction, quality of life and clinical outcomes.[4–7] This is recognised in the Aged Care Quality Standards (ACQS), which address the following areas for residents in PSRACS.[8]

- the right of choice
- ability to exercise autonomy and independence
- partnering with health services for planning and evaluating practices
- access to services that support wellbeing
- adequate staffing
- well-developed complaints/feedback processes
- meals that are 'varied and of reasonable quality'.

The Victorian Department of Health has identified unplanned weight loss as one of five quality indicators that PSRACS report on.[9,10] PSRACS use these indicators to drive improvement in service quality, identifying areas for improvement and benchmarking against other PSRACS.

Menu planning and evaluation in PSRACS can raise the bar on resident satisfaction and enhance quality of life.[11] As such, it should be approached as a CQI process that habitually involves residents.[12,13] These Standards align with and support PSRACS in meeting ACQS accreditation requirements in ensuring menu planning takes a resident-centric approach where choice, autonomy and dignity are respected.[8]

Implementing these *Nutrition and quality food standards for adults in Victorian public hospitals and residential aged care services* will support health services and PSRACS in meeting the relevant NSQHS Standards[3] and ACQS[8] accreditation requirements relating to nutritional care and consumer choice.

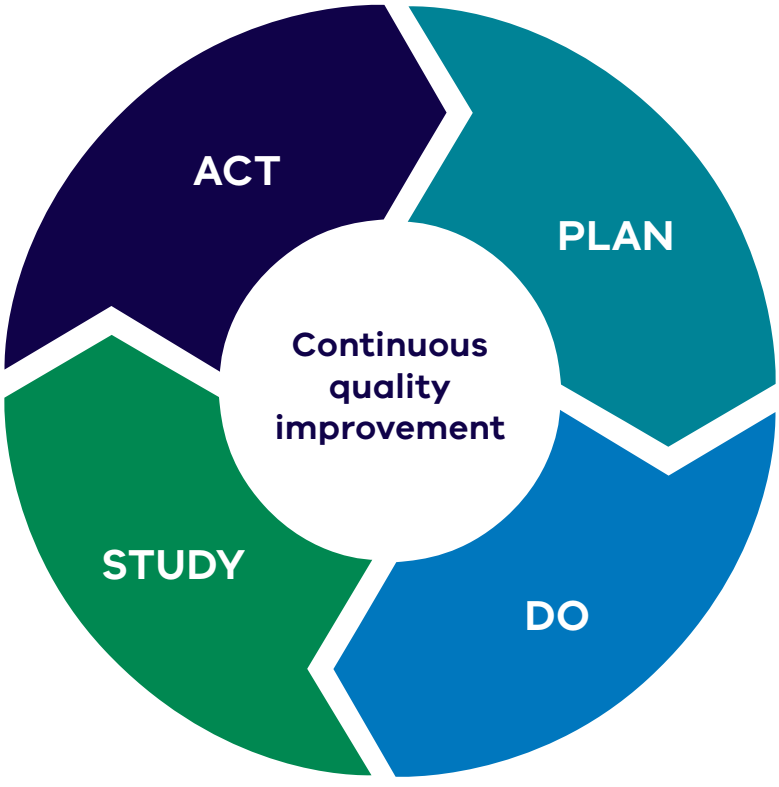
Governance

Health services should set up governance systems for delivering food and nutrition services. These systems should have a strong emphasis on multidisciplinary/stakeholder involvement and representation.[3,14–17]

1.2 Continuous quality improvement

As shown in Figure 1, originally adapted from Langley et al.,[18] CQI is a coordinated and continuous approach to testing and implementing changes.[19]

Figure 1: PDSA cycle of continuous quality improvement



All menus and food service systems should undergo a process of CQI to ensure high-quality food and fluids that are nutritionally adequate, safe, and appropriate for the health service population. Oversight should be provided by a multidisciplinary steering committee with representation from key stakeholders, which is outlined in the menu planning and review cycle (section 5). These CQI processes and evidence of improvements based on feedback and outcomes also form part of adhering to the NSQHS Standards and ACQS.[3,8]

Undertaking regular quality assurance activities will help with assessing, monitoring and making changes to improve the quality of the menu and mealtime environment. It is important to document evidence of outcomes and actions taken to improve meals, menus and processes based on feedback from CQI activities. Quality assurance activities include:

- menu reviews
- mealtime environment audits
- tray-line and/or point-of-service meal quality auditing (presentation, accuracy, temperature, portion weight, taste and texture)
- consumption and food waste audits (patient/resident level and/or kitchen level)
- patient and resident feedback, which can be in the form of:
  - point-of-service satisfaction audits
  - patient/resident feedback sessions (these should represent the population of the health service)
  - community consultation (this may include local culturally diverse community groups)
  - taste testing.

For more information on paediatric patient and family engagement, please refer to the section titled 'Continuous quality improvement and patient/family engagement' in *Nutrition and quality food standards for paediatric patients in Victorian hospitals*.

Menu review

Menu planning is a complex process outlined in section 5. This process should be followed to ensure systematic review and development of a menu that reflects the individual needs of the health service and the patients/residents using the health service. To provide meals that meet the nutrition needs of specific population groups for religious, cultural and TM food and fluid requirements, it may be suitable and cost-effective to source pre-prepared meals from an external supplier to be offered as part of, or in addition to, the baseline menu.

Menu reviews result in improved quality of life scores in PSRACS.[20] Regular changes to menus based on resident feedback improves satisfaction and can lead to improved body weight.[6] Routine menu reviews can help ensure patients'/residents' preferences based on cultural diversity and special dietary requirements are met.[21,22] Continually receiving user feedback and regular auditing is recommended to enhance the next cycle of menu planning in hospitals.[16] Menu reviews should aim to genuinely vary the meals and items provided in line with patient/resident feedback while also aligning to the relevant national standard – for example, NSQHS Standards or ACQS.[3,8]

1.3 Food service systems

These Standards have been developed with existing models of food service front of mind. Victorian public health services have a variety of food service systems and various stages of electronic menu ordering system implementations; however, most remain on a model of fixed-time meal delivery.

The food service systems used across Victorian hospitals and PSRACS include:

- meal production – for example, cook-fresh, cook-chill, cook-freeze or hybrid
- menu ordering systems – for example, paper-based, spoken menu and bedside electronic or hybrid
- meal delivery models – for example, à la carte, room service, point-of-service/bain-marie, traditional fixed-time or hybrid.

Food service systems should align with the NSQHS Standards[3] and ACQS,[8] with collaboration between dietitians, food service managers and speech pathologists to ensure risks are identified and managed. This will help minimise harm to patients and residents.[3,8] Staff may need to work with the health service executive for approval and funding, and technology may need to be considered for implementation.

Meal ordering

Evidence supports that patient-centred meal ordering, including electronic bedside menu ordering systems, improve patient/resident satisfaction, decrease food waste and increase oral intake. They also improve the overall meal experience.[23–25] Specific aspects of systems that improve satisfaction and oral intake are:

- interaction with food service or nutrition staff
- flexible mealtimes
- ability to order preferred meal choices closer to delivery times.

Health services should address barriers to patient meal ordering, factoring in cognitive, sensory ability and language.[3,8] It may help to use interpreters, pictorial and/or translated menus.

Meal timings and duration should allow enough time for meals to be eaten. Expert opinion supports that dishes have a commonly understood and accepted name or a description that accurately reflects the contents. Incorporating pictorial menus may help certain patients/residents (e.g. those with a cognitive impairment) and help with independent meal ordering across culturally diverse populations.[23]

Expert opinion supports that health services should consider a site-specific policy or menu that addresses day patients, out-of-hours meals and late admissions. While food from home is out of scope of this document, it is a familiar and alternative way for patients and residents to meet their nutrition needs. Health services should consider a site-specific policy for managing food from home.

1.4 Respecting cultural diversity

The *Australian Charter of Healthcare Rights* stipulates that patients and residents have the right to have their culture, identity, beliefs and choices recognised and respected.[26] Further to this, the NSQHS Standards and the ACQS state that the identity, culture and diversity of patients and residents should be valued and that health services should work in partnership with cultural groups including Aboriginal patients/residents to support their choices, preferences and healthcare needs.[3,8] The National Aged Care Mandatory Indicator Program acknowledges that unplanned weight loss can occur when there are issues relating to quality and access to food choices that meet a resident's cultural, religious and personal food preferences.[10]

To adhere to national quality standards, menus provided in health services should meet the cultural and religious needs of patients/residents and offer genuine options to meet individual needs and preferences. If patients/residents have difficulty communicating their meal and menu preferences, health services should address this barrier using interpreters during patient and resident consultation processes and/or using pictorial or translated menus.[3,8,13,27] Hospital Aboriginal liaison officers can assist with communication and traditional cultural understanding relating to food and mealtimes for these patients. Patients' and residents' culture and traditions that relate to food should be discussed during patient/resident consultation meetings. Seeking guidance from local religious or cultural advisors is strongly recommended.[16,27,28] Staff should be appropriately trained in cultural awareness/safety and in appropriate communication across many cultures.[8,16,28] Strategies to meet cultural needs during mealtimes include providing appropriate utensils for eating (e.g. chopsticks or spoons) and accepting the use of fingers, traditionally used condiments such as chutneys, soy sauce and chili sauce, and serving food in bowls rather than on plates if preferred.[13,16]

1.5 Workforce

Food service dietitian

Research indicates that having a dedicated food service dietitian may improve:[16,29,30]

- compliance with relevant standards
- suitability of systems
- acceptability of menus
- stock management
- food wastage.

A review by the Victorian Department of Health into food service practices in hospitals and PSRACS mirrored these results, finding that sites with a dedicated food service dietitian responded better to menu planning.[31] However, it was also identified that many health services in Victoria do not currently have access to a dedicated food service dietitian.[31]

The equivalent full-time (EFT) hours dedicated to a food service dietitian role will differ between health services. The number of beds, type of food service system and the complexity of the patients/residents will all need to be considered when deciding whether the role exists in an ongoing capacity, is shared across a number of health services, or is engaged for regular short-term pieces of work.

Chefs and cooks who report adequate access to a food service dietitian are more confident in providing food for patients/residents who have special dietary needs (disease specific, allergies, texture modification) than those who have limited or no access to a food service dietitian.[32]

A food service dietitian is responsible for leading menu design, review and quality improvement, as well as being the main link between food and clinical services.[33] The food service dietitian bridges the gap between food service, procurement and clinical systems.[16,29,30] They should have sufficient training, skills and experience, and the authority to enact changes.[30,33]

Staffing at mealtimes

Adequate staffing at mealtimes helps create a supportive meal environment. Staff can assist with seating residents, opening packages, setting up meals, providing assistance with eating and provide physical and verbal encouragement.[16,28,34] This reduces the risk of malnutrition and improves satisfaction and oral intake.[6,35–38]

When the staff who are present at mealtime have received education on assistance with eating practices, food service and basic malnutrition intervention or prevention, there is improved oral intake and satisfaction among residents.[21,39,40]

1.6 Sustainability and food procurement

A systematic review, incorporating 80 studies, showed that food waste was responsible for 20–30 per cent of total hospital waste.[41] The food supply chain can have an adverse impact on the environment at every stage of the process – production or procurement, distribution, preparation, consumption and waste management and disposal.[41–43] Food waste produced at the consumption stage creates a greater carbon footprint than waste produced in earlier stages.[42,43] This is a result of increased energy and resource use through transport, processing and production processes.[43] Sustainable food production can minimise the impact on the environment and climate. Victorian health services are required to align their environmental management plans with the *Environmental sustainability strategy*.[44] Health services are encouraged, by 2023, to develop site-specific sustainability policies that minimise food waste where it is economically feasible and to purchase less single-use plastic.[44]

Health services should make every effort to implement strategies to improve the quality (taste, appearance, presentation) of meals. This will improve consumption and acceptability, subsequently reducing food waste.[45] A bedside electronic menu ordering system that allows residents to order as close to possible to the time of food delivery reduces food waste in health services.[24,25] Food waste audits help in tracking food waste production, menu modifications and CQI.[46,47] Food waste disposal practices such as dehydration or anaerobic digestion machine, composting or mechanical digestor reduce carbon impact when compared with disposing to landfill.[48,49] Where possible, health services should buy local or Victorian and seasonal produce to reduce the negative environmental impacts of long-distance food transportation and develop their own organisational food policy (in compliance with HealthShare Victoria's catering supplies contract, waste management services contract and health purchasing policies).[50–52]

Refer to Appendix 1 for sustainable food waste reduction strategies.

1.7 Food safety and allergy management

It is not within the scope of this document to extensively describe the requirements for safely producing food in health services. Find more information on this in Food Standards Australia New Zealand (FSANZ) food industry guidelines. Specific considerations for vulnerable populations, including hospital and residential care populations, can be found in:

- Victorian *Food Act 1984* requirements for food safety programs[175]
- Australia New Zealand Food Standards Code[53]
- Australia New Zealand Food Standards Code – Standard 3.3.1 – Food Safety Programs for Food Service to Vulnerable Persons (F2011C00592).[54]

Food allergy management is a major part of risk management. Up to 4 per cent of adults across Australia and New Zealand have a food allergy, with the most common being to fish and shellfish.[55]

Health services should ensure allergen management aligns with the Victorian *Food Act 1984*[175] and FSANZ Food Standards 3.2, 3.3 and any mandatory declarations required under 1.2.3 – 4 and Schedule 9.[53,54] This is to be guided by each health service's locally developed food safety program and management of food allergy policies. The allergy management policy, which includes a process for identifying patients with food allergies, and the preparation of allergen-free foods and fluids, is to be documented and audited both internally and as part of a third-party food safety audit.

Food safety and allergy management training is recommended for all staff involved in food service, from sourcing/purchasing through to serving patients/residents.

Refer to Appendix 2 for useful links to food safety and allergy management resources.

1.8 Malnutrition

Historically there has not been consensus on malnutrition diagnosis. The Global Leadership Initiative on Malnutrition (GLIM) developed criteria by consensus for diagnosing malnutrition in clinical settings. The GLIM criteria incorporates assessing body weight loss, body mass index and muscle mass.[56]

Malnutrition affects many patients/residents and has significant negative implications for care including morbidity and mortality risk, quality of life and healthcare costs.[21,57–63] In 2018 the Australian Commission on Safety and Quality in Health Care estimated that 5,400 hospital-acquired episodes of malnutrition occur each year in Australian hospitals,[64] with each episode predicted to cost an average of $9,320.[65] Following a review of hospital-acquired complications in Victoria, malnutrition is now considered a 'Targeting zero' safety indicator.[66]

The NSQHS Standards[3] and the ACQS[8] recognise malnutrition prevention, screening and intervention as standard practice in hospitals and PSRACS.

It is important to acknowledge that patients and residents who are overweight or obese are equally as vulnerable to developing malnutrition but are at risk of 'being missed' by screening practices. This is due to weight bias, misinformation and inadequate screening practices.[67] More work needs to be done in this area, but nutrition screening training with a focus on obesity malnutrition will help dispel myths and decrease the frequency of weight bias.

Hospital-acquired malnutrition and unplanned weight loss are frequently used as quality indicators in hospitals and PSRACS. Unplanned weight loss in PSRACS must be reported to the National Aged Care Mandatory Quality Indicator Program.[10]

In Australia, approximately 33 per cent of patients[59,68] and 22–50 per cent of residents[63,69] are malnourished. Many more patients and residents are at risk of malnutrition, with both hospital admission[70] and placement in a care home[63,69,71] being independent risk factors.

The cause of malnutrition often differs between hospitals and PSRACS. In hospitals, the impact of illness on appetite is a significant barrier to oral intake.[70,72] Poor oral intake, even when independent of disease type, severity, and malnutrition, is associated with increased hospital mortality.[59] For those who are malnourished, it has been reported that 33 per cent consume less than 25 per cent of hospital-provided food across their stay.[68] In addition, regardless of nutritional status on admission, 75 per cent of patients consume less than 100 per cent of the hospital-provided food,[59,68] with approximately 50 per cent consuming less than 50 per cent in the initial three days of admission.[70]

The causes of malnutrition in PSRACS are diverse and complex. They include, but are not limited to: [21,63,71,73–78]

- inadequate nutrition
- inadequate oral intake
- anorexia
- difficulty with self-feeding
- social problems
- gastrointestinal symptoms
- use of plastic dishware
- inability by nursing staff to identify and intervene
- decline in cognitive capacity and dementia
- a loss of interest in life.

A considered food service system with targeted menu planning can provide a food environment that reduces malnutrition risk and supports malnutrition treatment.

Food First, food fortification and oral nutrition supplements

Oral nutrition supplements (ONS) are commonly prescribed to bridge the gap between oral intake and estimated requirements but are poorly consumed.[16,70,79] ONS should not substitute food. ONS should only be used where clinically indicated, including for malnourished patients/residents or those who are nutritionally at risk.[16,80] The Food First approach is a simple way to improve the nutritional intake of patients and residents using food-based strategies. Examples of the Food First approach include food fortification, offering nourishing snacks and encouraging regular but small meals. It is well evidenced as a more effective and economical measure to improve the nutritional intake of patients and residents and should be tried before ONS.[14–16,79,81–85]

Food fortification involves using foods (dairy, eggs, honey, avocado), powders (milk, soy, glucose) or oils that are naturally high in energy and protein to increase the nutritional value of food without increasing the volume. It is common practice to fortify soups, mashed vegetables, casserole dishes and desserts with predominantly dairy-based foods and products, but processes are inconsistent and nutrient provision varied.[14–16,86]

Refer to Appendix 3 for food fortification strategies.

Providing regular snacks and using food fortification improves oral intake in older adults and can lead to improved resident satisfaction.[21,35,36,47,83,84,87,88] Therefore, the baseline diet should primarily incorporate these strategies to meet these Standards and should not rely on ONS or powders, which are shown to be wasteful.[47,89]

1.9 Dietary guidelines

The ADGs provide evidence-based guidance for healthy eating with a focus on foods and nutrients linked to chronic diseases such as sodium and saturated fat. The *Australian guide to healthy eating* (AGHE)[90] is an evidence-based food selection guide, supporting the ADGs, that visually represents the proportion of the five food groups recommended for consumption each day. Meeting ADG and AGHE recommendations ensures adequate micro and macronutrient intake for the healthy population. It also supports food-based eating patterns for preventing and treating many chronic diseases with well-known links to dietary intake.[91,92]

The National Reference Values (NRVs) for Australia and New Zealand are a set of evidence-based nutrient targets for micro and macronutrients that aim to prevent deficiencies or excess in the healthy population.[93] In addition to the AGHE and NRVs, current evidence-based guidelines for preventing and managing specific chronic diseases such as cardiovascular disease, chronic kidney disease, cancer and diabetes have also been reviewed and considered in developing these Standards.[91,92,94–101]

Refer to Appendix 4 for more on micro and macronutrient goals.

The following statements describe optimal dietary patterns where there is significant consensus across the guidelines:

- adequate fibre intake from regularly consuming fruit, vegetables and wholegrains[90–92,94–99]
- adequate protein intake from regularly consuming fish (especially oily fish), legumes, nuts, dairy, eggs and unprocessed lean meat[86,91–95,97,99–104]
- a higher intake of unsaturated fat compared with saturated fat through regularly consuming plant or seed-based oils, oily fish, nuts, avocado and seeds while limiting use of processed meat, animal fat, butter/ghee, coconut oil and palm oil[90–92,94,95,105]
- a daily sodium intake below 2,000 mg through choosing low-salt foods and limiting salt added during cooking by using herbs and spices for flavour[16,91–96,99,106–108]
- limited intake of food and drink mostly containing refined sugar, sodium, alcohol or saturated fat with limited other nutrients.[90,91,92,97,99,109]

Development of these Standards has been guided by the ADGs, AGHE, NRVs, and the optimal dietary patterns described above, with the view that patients/residents should be able to meet these recommendations while in hospitals or PSRACS. It is acknowledged that the ADGs, AGHE and NRVs are based on the requirements of a healthy population, and patients/residents will commonly have increased nutritional requirements, as well as being at greater risk of developing malnutrition.[35,59,63,68–70,110–113] Expert opinion supports increasing the use of dairy for fortification and offering ADG-classified 'discretionary' items as strategies for providing additional protein and energy. These strategies are used for patients and residents who are at increased risk of malnutrition or experiencing poor oral intake because of disease or age-related appetite decline. It is recognised that these foods and fluids may contain higher sugar, sodium and saturated fat than recommended by dietary guidelines so their use should be monitored and adjusted along with the improved nutrition status of patients/residents.

1.10 Texture modified food and fluids

TM foods and fluids are within scope of these Standards and are subject to the same principles of nutrient banding and minimum menu choice. The IDDSI framework, as presented in Appendix 5, has replaced the Australian Standards for TM food and fluids as best practice for labelling and testing TM food and fluids. Full adoption of the IDDSI framework is voluntary, but textures and fluids provided in health services should still comply with their corresponding IDDSI classifications.[114]

It is important to review and improve the presentation of TM food and fluids. Using food moulds to enhance TM meal presentation improves acceptability and oral intake.[21,115,116] Other strategies like piping, layering of food and adding texture-appropriate garnishes should also be considered to improve presentation while retaining nutritional adequacy.[117–119] Every effort should be made to retain the nutritional adequacy of TM foods without excessively increasing the volume. This can be achieved through food fortification strategies, as outlined in Appendix 3.

Expert opinion guides that delivering moulded meals presents challenges for some food service systems. For example, the loss of structure with re-therming processes often requires excess bulking agents to improve presentation. These may affect the taste of the meal and, as such, moulded meals may not always represent an improvement in quality. In these circumstances, alternative options for presentation should be considered.

1.11 Disability and dysphagia

Every year 22 per cent of people with disability have a hospital admission.[120] In aged care health services 90 per cent of residents have a physical disability and 75 per cent have a psychosocial disability.[121]

Dysphagia is over-represented in people with disability and is linked with being underweight.[122] The National Disability Insurance Scheme (NDIS) Quality and Safeguards Commission carried out a scoping review of reported deaths (n = 901) of people with disability between 2013 and 2019. The study found that most deaths due to unnatural causes were related to choking and aspiration pneumonia. It also found that comprehensive risk assessments for dysphagia had not consistently been completed for these individuals.[123] Other studies have also confirmed a trend of preventable deaths relating to choking or aspiration pneumonia.[122]

Health services that are NDIS providers have an obligation under the NDIS practice standards and code of conduct[124,125] to manage risks in order to provide safe and quality support to patients and residents with disabilities.

Dysphagia, however, is not unique to disability and is identified and managed at all health services, with a known increase to healthcare costs.[126]

In order to provide a safe meal environment to patients/residents with and without disability, the NDIS and Safer Care Victoria recommend that health services:[127,128]

- ensure staff have training in dysphagia symptoms, risks and relevant mealtime management including assistance with eating and monitoring safety
- have pathways developed for escalating new swallowing difficulties that need speech pathology assessment
- have pathways developed to ensure patients and residents with dysphagia have mealtime management plans or 'specified higher level care' where requirements at mealtimes have been clearly communicated. Mealtime management plans will involve a speech pathologist and may also involve other allied health or medical professionals. Mealtime management plans should be reviewed regularly to ensure they are as accurate to the patient or resident's current degree of dysphagia as possible.

1.12 Meal environment

The literature on changes to meal environment is highly diverse and mostly reflects aged care services and those with dementia, so it is difficult to make any overarching recommendations. It is likely that no recommendations would be appropriate for all health services.

For PSRACS, most studies of changes to meal environment compared with maintaining the status quo showed improvement in either oral intake, body weight, behaviours at mealtime, physical performance or resident satisfaction and quality of life. There are some meal environment considerations where the evidence repeatedly showed positive impacts on satisfaction, quality of life and nutritional status for residents. These include:

- creating ambient dining room experiences[21,35,36,129,130]
- reducing the use of plastic cutlery and dinnerware[20]
- replicating home or restaurant-style dining[5,6,20,36,88,131]
- creating meal environments that promote social interactions.[20,130,131]

These strategies should be considered and implemented first and foremost. Alternative changes to meal environments should be trialled within a quality improvement framework.

There is limited evidence for meal environment improvement strategies for patients in hospitals. Studies evaluating protected mealtimes, dining room environments or changing the colour of napkins have not produced strong evidence of increased nutrition intake.[132–135] It has been recommended that patients be alerted to pending mealtimes and should be positioned suitably and appropriately, with hand wipes made available.[16] Patients should also be asked if they need help with eating, or help with opening packaging.[16]

Refer to Appendix 6 for more on meal environment strategies.

2. Background and rationale – developing the baseline diet

2. Background and rationale – developing the baseline diet

The 'baseline diet' refers to the diet prescribed for most patients and residents on admission and throughout their length of stay. This diet is commonly referred to as a 'full ward diet'. The minimum energy and protein provision (section 3) and minimum nutrient banding and minimum menu choice (section 4) apply equally to the baseline diet and to TM foods and fluids.

2.1 Hospitals

Population

Victoria has 151 hospitals and an average of 14,820 available beds.[136] The average length of stay in hospital in Australia is 2.9 days (or 5.2 days when same day separations are excluded).[137] For the year 2017–18, there was a similar number of male and female admissions (49.5 per cent and 50.5 per cent respectively), with 41.2 per cent being over 65 years of age and 1.6 per cent identifying as Aboriginal and/or Torres Strait Islander.[136]

Assessing the patient population is fundamental to providing food for optimal oral intake. Patients should be able to receive a menu that respects their diverse requirements, demographics and backgrounds.[86,104,138–142]

The population of any hospital is constantly changing, with diversity in the demographics, illness type and severity. The nutritional vulnerability of patients also varies. People with mental health conditions and those living with disability can have specific requirements.

Reference person

For the purposes of these Standards a reference person has been selected and is used to calculate the minimum target energy and protein provision per day per patient. The characteristics have been drawn from 2018 Australian statistics. Used in conjunction with nutrient banding and minimum menu choice recommendations, this ensures baseline nutritional requirements of patients are met. If there is adequate evidence that hospitals have a significantly different patient population, then it is acceptable to adjust the reference person used, and therefore the baseline diet. Characteristics of the reference person for patients (excluding those from PSRACS) are listed in Table 1.

Table 1: Hospital reference person

Measure	Specifics	Rationale
Gender	Male	Chosen due to greater energy and protein needs of this gender group
Age	51–70 years	The highest percentage of the hospital population in Victoria in 2018–19 was 55–74 years at 32.6%[136]
Weight	80 kg	Midpoint between the average body weights for male and female[143]
Height	174 cm	Average height of males ≥ 18 years in Australia in 2017–18[143]
BMI	26.4 kg/m^2	Based on age 51–70, which incorporates a higher BMI range for > 65 years of 24–31 kg/m^2 [144]

The above reference weight differs from that currently used in nutrition standards across Australia, which are 76 kg for males and 61 kg for females (adults aged over 19 years). These previous weights were derived from the 1995 National Nutrition Survey and are considerably lower than the latest reported average weights in Australia.[93]

As per the 2017–18 National Health Survey, the average measured weight in Australia for males aged over 18 years is 87.0 kg and for females is 71.8 kg.[143] Rates of overweight and obesity are on the rise. In 2018, 51.2 per cent of adults aged over 18 in Victoria were classed as overweight or obese, with an increase of 5.0 kg for men and 4.8 kg for women between 1995 and 2018.[145]

Nutrition requirements

There is strong evidence that during illness, the nutrition requirements for even well-nourished people increases, with 1.3–1.5 times higher requirements suggested for this population. This is due to the catabolic effects of inflammation associated with both acute and chronic illness/disease.[111,146] Globally accepted recommendations include a minimum of 105 kJ/kg/day of energy and 1.0–1.5 g/kg/day of protein for adult hospitalised patients.[110,111] Research supports providing PSRACS residents who are admitted to hospital with a diet higher in energy and protein to help prevent lean muscle mass wastage, functional decline, infections and other health complications.[35,112] Refer to Appendix 4 for more on recommended micro and macronutrient goals.

Menu choice and variety

The absence of choice leads to poor consumption of meals in hospital.[146] Having a variety of food and fluids available to choose from, when patients already have limited control over their day, can greatly improve the overall hospital experience for some patients.[146]

Adequate variety and personal choice should be available for all patients, regardless of length of stay, through appropriate selection of a menu cycle length and minimum menu choices throughout. Menu cycles should be appropriate for the individual hospital population, incorporating appealing food choices and, where possible, seasonal variation.[16] In developing these Standards, it was deemed unnecessary to provide a short-stay menu in addition to the baseline menu, which should be designed to provide adequate choice and variety.

Maximising both the choice of suitable foods (provided in small, nutrient-dense servings) and the opportunities for patients to eat and drink at multiple mealtimes can improve overall oral intake.[104,147,148] In addition, a variety of appropriate garnishes (e.g. lemon and tartare sauce with fish; apple sauce with pork; mint sauce with lamb; or fresh berries on desserts) can improve the appearance, flavour and enjoyment of food,[16] including for those on TM diets.[117–119]

Evidence supports that the appetite is best at breakfast (particularly for older people), with the least waste recorded at this mealtime, and so providing a cooked breakfast may positively improve oral intake.[23,76,149]

Short order menu items

The availability of a short order menu (in addition to the baseline menu) increases choice for patients and results in improved patient satisfaction and oral intake.[16,23] An à la carte menu can reduce the risk of menu fatigue in long-stay patients.[16] Short order menus could be used as an alternative strategy to address menu repetition for long-stay patients. Short order menus should also be made available where population assessment identifies a need – for example, patients with increased nutrition requirements and/or at risk of malnutrition.

Short order menus allow adult-appropriate finger foods to be incorporated. While there is no clear evidence that these foods improve nutritional intake, they may promote independence in older patients/residents.[119]

Short order menus are fundamental to providing paediatric meals in many adult health services. Refer to Appendix 1 of the *Nutrition and quality food standards for paediatric patients in Victorian hospitals* for an example paediatric short order menu.

2.2 Public sector residential aged care services

Population

Australia's population is ageing and living longer due to medical advancement. Concurrently, demand for aged care services and PSRACS has increased, with the population living in PSRACS becoming older and more diverse, increasing the complexity of care needs. In Australia, initial admissions into PSRACS increased by 73 per cent between 2014 and 2019, where 59 per cent of these admissions were over 85 years old.[150] Between 2018 and 2019, about 240,000 Australians were living in PSRACS; 59 per cent were women, 33 per cent were born overseas, 64 per cent had high care needs for cognition and behaviour, and the average length of stay was 34.4 months.[150,151]

Reference person

For the purposes of these Standards, a reference person has been selected to calculate the minimum target energy and protein provision per day per aged care resident. The reference person should be used in conjunction with nutrient banding and minimum menu choice recommendations to ensure baseline nutritional requirements of residents are met. If there is enough evidence that an aged care service has a significantly different resident population, then it is acceptable to adjust the reference person and baseline diet accordingly.

Table 2: Aged care home reference person

Measure	Specifics	Rationale
Gender	Male	Chosen due to greater energy and protein needs of this gender group
Age	> 85 years	Average age of residents is 87 years and most first admissions are > 85 years[143]
Weight	68 kg	Midpoint between the average body weights for male and female in > 85-year age group[143]
Height	165.4 cm	Average height of males ≥ 85 years[143]
BMI	24.9 kg/m^2	Based on the midpoint of average weights and deemed acceptable given healthy BMI range for > 65 years 24–31 kg/m2[144]

Nutrition requirements

Metabolic requirements for energy and protein rise with advancing age. Recommended energy requirements to sustain lean muscle mass increase from 25 kcal/kg (105 kJ/kg) to 30 kcal/kg (125 kJ/kg)[35] and protein requirements from 1.0 g/kg to 1.2 g/kg/day during the transition from adult to older age.[35,112,113]

Providing a diet traditionally thought of as a 'high-energy, high-protein diet' is fundamental for nutritional adequacy for older adults. Providing adequate energy and protein from meat, fish and alternatives, as well as adequate serves of dairy foods, supports malnutrition prevention and management.[21,35,36,47,73,83,84,112,113,152–154] High-energy, high-protein diets also improve resident satisfaction.[88]

Therapeutic diets often provide less energy, protein and serves of food groups than recommended. Their use can contribute to risk of malnutrition, with little proven benefit in this population.[29,35,36,153] For these reasons, they should be avoided or limited. Where therapeutic diets are indicated, they should be carefully designed to minimise malnutrition risk.

Refer to Appendix 4 for more on recommended micro and macronutrient goals.

Menu choice and variety

Residents are experts in their own experiences, and their personal preferences including food choice is a fundamental right that should be respected.[7,8,155] This reflects the ACQS, however one study noted that many PSRACS in Australia do not offer choice to residents at every meal.[156] Additionally, despite up to two-thirds of residents requiring TM food and fluids at some point during their stay,[157,158] many PSRACS do not offer choice at all on a TM food and fluid menu.[156]

Providing hot meals at breakfast improves choice but is also shown to improve overall nutritional adequacy by taking advantage of often larger appetites seen at breakfast.[149] Having the choice of food in PSRACS improves satisfaction, quality of life and oral intake by respecting individuality, autonomy and dignity.[4–6,21,131,159]

Adult-appropriate finger food

Providing adult-appropriate finger food can promote independence in those who have lost the ability to self-feed. Evidence shows that adult-appropriate finger food can improve wellbeing, presumably through improved independence at mealtimes, and is generally seen as beneficial by care providers.[20,119] It is not well established that specific adult finger food menus improve overall oral intake. However, if a significant portion of the health service's population needs help with eating, then it is recommended that sufficient adult-appropriate finger food options be available.[35] Specific adult finger food menus should not replace a baseline diet and are not required to meet nutrient banding targets. These menus should therefore not be presumed to provide adequate nutrition and, where used, clinical interventions to identify, prevent and treat malnutrition should be initiated.

3. Standards

3. Standards

The following Standards represent best practice and are based on the evidence and rationale found in sections 1 and 2, along with alignment to NSQHS Standards and ACQS.[3,8] There may be flexibility in how individual health services implement and achieve the Standards.

The terms 'required', 'recommended' and 'suggested' are used to identify the evidence justification for each of the Standards.

- A Standard is classified as **'required'** where it is necessary to ensure patient and resident safety.
- If a Standard is **'recommended'**, there is strong evidence supporting its implementation.
- If a Standard is **'suggested'**, there is emerging evidence or expert opinion supporting its implementation.

3.1 Continuous quality improvement

CQI standards

Governance It is recommended that:
• A nutrition steering committee is appointed, to meet six times annually, to monitor and progress food and nutrition quality and safety.
• There is allocated EFT for a food service dietitian (ongoing or intermittently) with governance and reporting responsibilities within food services.
Quality assurance It is recommended that:
• Feedback-driven quality assurance activities are undertaken, with documented evidence of outcomes and actions for communication, review and audit purposes.
• There are quarterly (at a minimum) internal tray-line and/or point-of-service quality audits (presentation, accuracy, temperature, portion weight, taste and texture compliance).
• There are six-monthly (at a minimum) internal food consumption and waste audits.
• There are quarterly (at a minimum) point-of-service patient/resident/family satisfaction surveys.
• There are quarterly (at a minimum) patient/resident/family feedback sessions, representing the health service population and including taste testing for existing and/or new dishes.
• Services undertake responsive community consultation, including with local culturally diverse community groups.
• Quality audit tools be used as part of a CQI cycle, with documented evidence of changes for communication, review and audit purposes. (Refer to Appendix 7 for advice on quality audit tools).
Patient and resident feedback mechanisms To ensure alignment with NSQHS Standards[3] and ACQS[8], it is recommended that:
• There are clear internal processes for managing food service–related feedback and complaints, which may result in menu changes, with documented evidence of actions taken, for communication, review and audit purposes.
• Patient/resident/family representation reflects the health service population, with relevant cultural representation given the opportunity to provide input/feedback throughout the CQI cycle.
• Equitable access to providing feedback be available via interpreters (language or relay for people who are blind, deaf or hard-of-hearing) to allow patient/resident/family involvement.
• Timely communication of action/inaction taken in response to patient/resident/family feedback be given to participants.

Menu planning and review It is recommended that:
• Menu planning is led by a food service dietitian and food service manager, in collaboration with other key stakeholders including patient/resident/family representation, to ensure the needs of the health service population are met.
• There are annual (at a minimum) full menu reviews for hospitals.
• There are six-monthly (at a minimum) full menu reviews for PSRACS.
• Menu and recipe creation activities have documented evidence of the impact of the specific food service and menu ordering systems to do with taste, presentation and texture.
• Consideration is given to using electronic and/or flexible menu ordering systems to enable orders of preferred foods and fluids as close as possible to delivery times.
• Menus are designed to meet the nutritional requirements of most of the health service population, with documented evidence of demographic, clinical, cultural, religious, psychosocial, average length of stay and patient/resident/family preference considerations.
• All menu items have documented standardised recipes and/or product specifications with serve sizes that have been endorsed by a food service dietitian and are followed by chefs/cooks and food service staff.
• All recipe or product changes or substitutions are approved by a food service dietitian.
• Meal presentation is included in documented recipes and product sheets, incorporating decanting, garnishing and any piping/layering/moulding requirements for TM meals.
• Seasonal menus with genuine changes to dishes, fruit and snacks based on seasonal produce and patient/resident/family feedback are routinely considered.
• Menu items have commonly accepted and understood names and/or a description that accurately reflects the contents of the dish for ease of patient/resident/family recognition.
• Pictorial and translated menus are available where there is an identified need in the health service population assessment.
• Culturally diverse menu items are authentic and prepared in a way that is recognised and accepted by patients/residents of that culture. This may be met by sourcing appropriate meals from an external supplier.

3.2 Baseline diet and texture modified food and fluids

For paediatric menus, or paediatric short order menus, please refer to the *Nutrition and quality food standards for paediatric patients in Victorian hospitals*.

Baseline diet and TM food and fluid standards

General It is recommended that:
• The baseline diet provides sufficient minimum energy and protein to meet population needs, calculated using average population characteristics of the facility, and the following ranges to estimate requirements: – hospitals: 105 kJ/kg or 25 kcal/kg and 1.0 g/kg protein – PSRACS: 125 kJ/kg or 30 kcal/kg and 1.2 g/kg protein.
It is suggested that:
• Baseline regular texture and baseline TM diets provide a minimum of 8.5 MJ and 85 g protein daily (based on the reference person in Table 1 and Table 2).
It is recommended that:
• Baseline regular texture and TM diets meet the nutrient banding and minimum menu choice standards depicted in section 4 to offer the recommended daily food group/nutrients.
• Health services have a pathway for aligning with the IDDSI framework (refer to Appendix 5).
• A 'Food First' approach is used to achieve the baseline regular and TM nutrition provision via food fortification and regularly providing nourishing snacks and fluids, rather than relying on ONS or larger serve sizes. For fortification strategies, refer to Appendix 3. Strategies include using nutrient-dense fluids when producing TM menu items – for example, milk, yoghurt or cream.
It is required that:
• TM foods and fluids be approved by a speech pathologist for compliance.
• Drinking water is available to patients/residents 24 hours a day.
Australian dietary guidelines It is suggested that:
• Added salt is limited during cooking, and reduced sodium (< 120 mg / 100 g) and herb and spice alternatives are used where possible.
• Salt sachets/shakers are not automatically provided to patients/residents.
• Unsaturated fats (polyunsaturated/monounsaturated oils and margarines) are used/offered.

Hospitals only It is suggested that:
• Adult-based hospitals providing paediatric inpatient services provide a short order menu to meet the nutrition standards outlined in *Nutrition and quality food standards for paediatric patients in Victorian hospitals*.
• Hospitals have a site-specific policy or menu addressing day patients, out-of-hours main meals and late admissions while complying with nutrient banding requirements.
• Hospitals have a site-specific policy for managing food brought in from external sources – for example, food from home.
PSRACS only It is suggested that:
• Any resident placed on a diet restricting energy and protein to a level lower than the baseline diet is reviewed by a dietitian or doctor with a view to returning to increased nutrition provision as soon as possible.

3.3 Choice

For paediatric menus, or paediatric short order menus, please refer to the *Nutrition and quality food standards for paediatric patients in Victorian hospitals*.

Menu choice standards

General It is recommended that:
• Baseline regular texture and TM diets provide three main meals and three snacks per day.
• Main meals have size variations available, with the smallest meeting the minimum nutrient banding requirements.
• A variety of meal choices are provided, as depicted in the minimum menu choice standards in section 4
• A minimum of two fish meals be available per week, with one being an oily fish.
• Side dishes are to complement the main meal item, with appropriate offerings of a variety of grains/starch and vegetables/salads, aiming for wholegrains and contrasting coloured vegetables.
• The use of high-sodium, high-saturated fat processed meats be limited to twice a week as a major meal component, (e.g. bacon at breakfast once a week and a sausage casserole once a week) and be avoided as a sandwich ingredient where possible.
• Food allergies or intolerances, TM requirements, food preferences and assistance with eating requirements are documented and easily accessed for every patient/resident, with regular reviews to maintain accuracy.
• A vegetarian menu choice be available at every eating occasion, using a variety of protein sources including legumes, seeds, nuts, tofu, textured vegetable protein (TVP), milk, cheese and eggs. A short order menu may be used in conjunction with the standard menu to meet this Standard.
• Meal/snack selections be made as close to delivery as possible, and no longer than 48 hours prior.
• A short order menu be available to extend choices/variety of the standard menu for those requiring additional choices – for example, long-stay, paediatric and those requiring finger food choices.
• Plant-based, calcium-fortified milk alternatives are available on request.
• A baseline menu that mostly contains specific cultural, religious or vegetarian meals to meet the needs of the assessed population be available. This should comply with the nutrient banding and minimum menu choices in section 4.
• A dietitian reviews any patient/resident requiring vegan or TM vegetarian food and fluids to ensure nutrition adequacy.
• A dietitian reviews any patient/resident who relies on adult-appropriate finger food options as their main source of nutrition to ensure adequate nutrition, variety and choice.
PSRACS only It is suggested that:
• Band 1 snacks be made available 24 hours daily and offered after physical therapy/exercise.
• Menu choice and variety be further increased when celebrating themed days (e.g., BBQ Day or Football Grand Final Day) and cultural days (e.g. Chinese New Year or Christmas).

3.4 Meal environment

Meal environment standards

General It is recommended that:
• All food and fluids are within easy reach and provided in a way that the patient/resident can eat and drink.
• Where safe, and medically appropriate, all patients/residents are given the opportunity to sit out of bed for their meals.
• Non-plastic dinnerware (cutlery, plates, bowls, cups and table dressings) is used unless clinically unsafe and/or alternatives are prescribed by an occupational therapist.
PSRACS only It is suggested that:
• The mealtime and dining room environment be welcoming, comfortable and optimise the resident's sense of independence and interaction. Refer to Appendix 6 for examples of meal environment strategies.

3.5 Staffing

Staffing standards

General It is recommended that:
• Staff are allocated to all patients/residents who need help with eating. Staff include nurses, personal care assistants, allied health assistants and trained volunteers.
• Regular training for food safety in alignment with FSANZ, the IDDSI framework and the National Allergy Strategy is undertaken and documented for all staff involved in producing and delivering meals.
• Regular training on providing assistance with eating, including risk management of dysphagia and food allergies, is undertaken and documented for all staff undertaking this support service.
• Meal ordering assistance is provided to patients/residents who need extra help.
• Regular consumer engagement training is provided to all food service staff (chefs, kitchen staff and food delivery staff (including personal services and care assistants)) who interact with patients/residents.
It is suggested that:
• Regular nutrition training (basic principles) be provided to all staff involved in patient/resident meal delivery – for example, chefs/cooks, food service assistants, menu monitors, tray-line staff, delivery people (this could include personal services or care assistants) and nurses. Note: this is different from malnutrition screening training required for nursing staff.

3.6 Sustainability and food procurement

Sustainability and food procurement standards

General It is suggested that:
• Health services minimise the number of packets on a meal tray – for example, decanting cereals into a bowl and juice into a glass from bulk sources. There would be exceptions to this to ensure food safety, and management of allergies and specific diets (e.g. Kosher).
• Food waste management plans integrate with the Victorian Government's *Sustainability in Healthcare – Environmental sustainability strategy 2018–19 to 2022–23*.
• Health services ensure that, where possible, foods are seasonal and sourced from local or Victorian producers.
• Health services consider developing an organisational local food procurement policy.

Refer to Appendix 1 for further information on sustainable food waste reduction strategies.

4. Nutrient banding and minimum menu choice tables

4. Nutrient banding and minimum menu choice tables

4.1 Breakfast items

Measure	Band 1	Band 2	Band 3	Unbanded[#]
Description	High protein	Moderate protein	Included for dietary variety	Included for dietary variety
Serve size	Various	Various	Not specified	30–45 g
Energy	700 kJ minimum	700 kJ minimum	600 kJ maximum	Not specified
Protein	10 g minimum	5 g minimum	Not specified	Not specified
Sodium	600 mg maximum	600 mg maximum	Not specified	Not specified
Minimum menu choice/day	2 including 1 × hot breakfast item	2	Not specified	Variety to be offered daily
Minimum variety/ week	1 × hot cereal 5 × other options	5	Not specified	Not specified
Minimum proportion over 7 days	50%	Not specified	Not specified	Not specified
Maximum proportion over 7 days	Not specified	Not specified	30%*	Not specified
Examples	Eggs (minimum of 2 – scrambled/baked/ omelette) Fortified hot porridge Smoothie Muesli with Greek yoghurt (3.5% fat)	Pancakes with fruit/ syrup/cream Congee with chicken/egg Hot porridge (made with milk) Iced coffee Fruit and yoghurt	Bacon^ Sausages^ Vegetable sausages Hash brown	Cereals – mostly wholegrain: • wheat biscuits • sultana and bran flakes Bread/toast – mostly wholegrain served with spreads

Notes:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

* Band 3 breakfast choices may only be offered at a maximum of two mealtimes per week.

^ High-sodium, high–saturated fat processed meats (e.g. bacon, sausages/sausage mince, chorizo – as a major meal component) may only be offered a maximum of once per week.

[#] Unbanded breakfast choices are to be offered daily.

4.2 Soup

Measure	Band 1	Band 2	Unbanded
Description	High protein	Moderate protein	Included for dietary variety
Serve size	180–250 mL	180–250 mL	180–250 mL
Energy	600 kJ minimum	400 kJ minimum	Not specified
Protein	8 g minimum	5 g minimum	Not specified
Sodium	600 mg maximum	600 mg maximum	Not specified
Minimum menu choice/ day	1	Balance to ensure minimum of 2 choices/day	Not specified
Minimum variety/week	7 soup varieties		Not specified
Minimum proportion over 7 days	50%	Not specified	Not specified
Maximum proportion over 7 days	Not specified	Not specified	30%*
Examples	Minestrone Chicken and sweet corn Tofu and egg Egg and noodle Beef, barley and vegetable Spicy chicken, lentil and cauliflower Spicy lamb Spicy black bean	Creamy pumpkin Potato and leek Tomato and red lentil Mushroom, tofu and soba noodle Creamy mushroom Chicken tom yum Wonton Moroccan lentil and quinoa soup	Clear broths

Notes:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

* Unbanded soups may only be offered at a maximum of two mealtimes per week (excluding where clear fluid diets are required).

4.3 Main meals

Measure	Band 1	Band 2	Unbanded
Description	High protein	Moderate protein	Included for dietary variety
Suggested serve of protein component	65 g minimum cooked lean red meat 85 g minimum cooked poultry 110 g minimum cooked fish Vegetarian options*	50 g minimum cooked lean red meat 70 g minimum cooked poultry 90 g minimum cooked fish weight Vegetarian options*	Not specified
Energy	700 kJ minimum 1,250 kJ minimum for mixed salads#	700 kJ minimum 1,250 kJ minimum for mixed salads#	Not specified
Protein	20 g minimum	15 g minimum	Not specified
Sodium	600 mg maximum	600 mg maximum	Not specified
Minimum menu choice/ day	2 in total, minimum 1 hot	Not specified	Not specified
Minimum variety/week	14 meals	Not specified	Not specified
Minimum proportion over 7 days	50%	Not specified	Not specified
Maximum proportion over 7 days	Not specified	Not specified	30%^
Examples	Roast meat or roast meat salad Lamb curry Salmon pasta mornay Baked eggs with cheese and legumes Chilli con carne – minced meat or TVP, both with beans, yoghurt/cheese	Curried lentil patties Chicken casserole Beef rissoles and gravy Mixed dahl curry and yoghurt Tofu and legume stir-fry	Pastry-based pies/rolls Hot dogs Samosas Fried rice Vegetable stir-fry

Notes:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

* Will likely require a combination of TVP, dairy, legumes, lentils and eggs to achieve minimum protein.

For higher kilojoule requirements use grains / starchy vegetables / dressings in salads because it is unlikely that sides will also be ordered with these meals.

^ Unbanded main meal choices may only be offered at a maximum of two mealtimes per week and within this limit, high-sodium, high–saturated fat processed meats (e.g. sausages/sausage mince, bacon, prosciutto, hot dogs/ frankfurts, chorizo – as a major meal component) only offered a maximum of once per week.

4.4 Sides

Starch items

Measure	Band 1	Band 2
Description	Moderate energy and protein	Standard
Serve size	120 g maximum	120 g maximum
Energy	400 kJ minimum	Not specified
Protein	3 g minimum	Not specified
Sodium	Not specified	Not specified
Minimum menu choice/day	2	Balance to ensure minimum of 4 choices/day
Minimum variety/week	10 starch varieties	
Minimum proportion over 7 days	50%	Not specified
Maximum proportion over 7 days	Not specified	Not specified
Examples	Fortified mash / sweet potato mash Legume salads (e.g. three-bean, lentil) Wholegrain and/or speciality bread (e.g. olive focaccia, naan, roti) Buckwheat/barley Pasta / cous cous / polenta	Basmati/jasmine rice Boiled potatoes Rice noodles

Note:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

Vegetables

Measure	Band 1	Band 2
Description	Moderate energy and protein	Standard
Serve size	75 g	75 g
Energy	250 kJ minimum	Not specified
Protein	Not specified	Not specified
Sodium	Not specified	Not specified
Minimum menu choice/day	2	Balance to ensure minimum of 6 choices/day
Minimum variety/week	10 vegetable varieties	
Minimum proportion over 7 days	25%	Not specified
Maximum proportion over 7 days	Not specified	Not specified
Examples	Cheesy broccoli/cauliflower Honey carrots Salads / coleslaw with oil / honey / dairy dressings Chargrilled Mediterranean vegetables with olive oil Buttered garlic mushrooms	Steamed/baked/grilled vegetables with no added fats Side salad without dressing

Note:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

4.5 Sandwiches and wraps

Measure	Band 1	Band 2
Description	High protein	Moderate protein
Serve size	4-point sandwich or 25 cm wrap Lean meat: minimum 50 g Cheese: minimum 25 g Egg: minimum 45 g Fish: minimum 50 g	4-point sandwich or 25 cm wrap
Energy	1,250 kJ minimum	800 kJ minimum
Protein	15 g minimum	8 g minimum
Sodium	Not specified	Not specified
Minimum menu choice/day	1	Balance to ensure a minimum of 2 choices/day
Minimum variety/week	10 sandwich/wrap varieties	
Minimum proportion over 7 days	50%	Not specified
Maximum proportion over 7 days	Not specified	Not specified
Examples	Egg, mayonnaise and lettuce Roast beef, mustard and baby spinach Chicken, cheese and avocado Tuna, mayonnaise and salad Falafel, hummus and salad	Cheese and salad Ham, salad and beetroot Marinated tofu and salad Peanut butter

Notes:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) and limit salt additions during cooking/preparation.

Where possible, avoid using high–saturated fat, high-sodium processed meats (e.g. salami, Strasburg, Devon, Mortadella, bacon) in sandwiches/wraps.

4.6 Desserts

Measure	Band 1	Band 2	Unbanded
Description	High energy	Moderate energy	Included for dietary variety
Serve size	90–120 g	90–120 g	Mousse, whips and plain ice cream: minimum 50 g Other desserts: minimum 80 g
Energy	800 kJ minimum	500 kJ minimum	Not specified
Protein	5 g minimum	4 g minimum	Not specified
Sodium	Not specified	Not specified	Not specified
Minimum menu choice/ day	2	Balance to ensure minimum of 4 choices/day	
Minimum variety/week	14 dessert varieties		
Minimum proportion over 7 days	50%	Not specified	Not specified
Maximum proportion over 7 days	Not specified	Not specified	Not specified
Examples	Cheesecake Baked custard (fortified) Trifle Milkshakes (200 mL) Fruit/cheese/cracker platter	Apple strudel Fruit crumble Custard Milkshake (100–150 mL) Ice cream (premium, creamy style, free scoop e.g. 2 large free scoops)	Jelly Fruit salad Plain ice cream cup Packaged ice cream confection item (choc-coated or cone-style) Berry mousse

Note:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

4.7 Snack items

Measure	Band 1	Band 2	Unbanded
Description	High protein	Lower energy	High energy/included for dietary variety
Serve size	Various	Various	Various
Energy	500 kJ minimum	600 kJ maximum	800 kJ maximum
Protein	5 g minimum	Not specified	Not specified
Sodium	400 mg per 100 g maximum	400 mg per 100 g maximum	400 mg per 100 g maximum
Minimum menu choice/ day	2	Balance to ensure minimum of 3 choices/day	
Minimum variety/week	10 regular texture varieties, 6 TM varieties		
Minimum proportion over 7 days	50%	Not specified	Not specified
Maximum proportion over 7 days	Not specified	Not specified	30%*
Examples	Cheese and crackers Mixed unsalted nuts Yoghurt / frozen yoghurt Milkshakes/smoothies Custard tart / custard 2-point sandwich#	Spicy baked chickpeas Boiled egg Vegetable sticks with hummus Cottage cheese on rice or corn cakes Pureed soups 2-point sandwich#	Cake / muffin / slice / sweet biscuit Sliced apple with nut butter Mini 'healthy' sausage roll (lean meat/added vegetable) Vegetable juice

Notes:

As per Standard 3.2 use unsaturated fats (poly/mono-unsaturated oils, margarine) where possible, and limit salt additions during cooking.

* Unbanded snacks may only be offered at a maximum of two mealtimes per week.

A 2-point sandwich (half a sandwich) may meet either Band 1 or 2, depending on the filling used.

4.8 Fruit

Measure	Band 1	Band 2
Description	Unprocessed	Processed
Serve size	150 g fresh fruit	125 mL fruit juice, 30 g dried fruit, 1 cup canned
Energy/protein	Not specified	
Minimum menu choice/day	3 across both bands	
Minimum variety/week	5 fruit varieties, including 1 seasonal fruit on rotation	
Minimum proportion over 7 days	66%	Not specified
Maximum proportion over 7 days	Not specified	33%*
Examples	Piece of fruit – 1 medium (orange, apple, banana, peach) or 2 small (mandarins, kiwifruit, apricots) Serve of fruit (grapes, berries) Fruit salad	Canned fruit in natural juice (e.g. PC cups or decanted) Dried apricots Orange/apple juice

Note:

* Band 2 fruit may only be offered at a maximum of seven times per week.

4.9 One-day menu example

Meal type	Regular texture	Pureed (IDDSI level 4)
Breakfast	Baked eggs and vegetables with cheese Porridge made with fortified milk Berry smoothie Yoghurt Breakfast cereal/bread/toast for variety Fruit serve could be included, (e.g. orange juice)	Pureed cheese omelette Porridge with fortified milk Strained berry smoothie (no fruit pieces) Smooth yoghurt (no fruit pieces) Apple or orange juice (no pulp)
Snacks	Orange Chocolate-chip mini muffin	Pureed apple Chocolate mousse
Lunch		
Soups	Beef, barley and vegetable Creamy tomato	Pureed beef, barley and vegetable Pureed creamy tomato
Mains	Salmon pasta mornay Beef rissoles with gravy	Pureed salmon pasta mornay Pureed beef rissoles with gravy
Starch	Green lentil salad Mashed potato	Pureed sweet potato Pureed fortified potato
Vegetables	Side garden salad Garlic mushrooms Silverbeet	Pureed fortified broccoli Pureed carrots Pureed and strained eggplant and tomato
Sandwiches/wraps	Cheese, refried beans and avocado with salad on wholemeal bread or wrap	
Desserts	Crème caramel Apple strudel with yoghurt	Crème caramel Pureed apple crumble
Snacks	Pear Caramel slice	Pureed pear Pureed herb or spiced ricotta whip

Meal type	Regular texture	Pureed (IDDSI level 4)
Dinner		
Mains	Roast lamb with mint sauce Curried lentil patties	Pureed roast lamb with mint sauce Pureed lentil and potato curry
Starch	Potato wedges Rice salad	Pureed fortified potato Pureed spiced rice
Vegetables	Roast pumpkin Green beans Side garden salad	Pureed pumpkin Pureed creamy cauliflower Pureed beetroot and apple
Sandwiches/wraps	Egg and lettuce on wholemeal bread or wrap	
Desserts	Trifle Fruit salad and ice cream	Pureed trifle Fortified custard
Snacks	Strawberries Frozen yoghurt	Pureed apple and strawberry Frozen yoghurt

5. Menu planning and review cycle

5. Menu planning and review cycle

This process refers to developing a menu for the baseline diet. Health services will also need to determine and devise individual therapeutic menus aligned with the health service population requirements. To ensure ongoing quality and suitability, the menu planning and review process is a continuous cycle involving the steps detailed in Figure 2. Refer to Appendix 8 for a menu planning and standards checklist.

Figure 2: Menu planning cycle

5.1 Stakeholder engagement

The process of engaging key personnel (Table 3) to provide oversight and governance of food service developments, which may be the nutrition steering committee, at your health service involves:

- identifying the relevant stakeholders from within and external to the organisation
- communicating the roles and responsibilities of each stakeholder
- scheduling regular meetings for throughout the menu planning/review process.

Table 3: Menu planning/review stakeholders

Typical stakeholder	Roles or responsibility
Organisational management	Budget overview Resource provision Infrastructure requirements
Risk and quality representative	Risk compliance Quality compliance
Procurement/purchasing manager	Structuring of contracts with suppliers
Nursing representative	Implementation practicality overview
Food service management	Implementation practicality overview Dish development/selection Overall menu design and review in conjunction with other key stakeholders Food safety Clinical governance and risk compliance
Food service dietitian / Nutrition and dietetic representation	Lead menu design Nutrition analysis expertise and quality development Clinical governance and risk compliance
Speech pathology	Alignment with IDDSI Input into menu design
Consumer representation	Input and quality monitoring

5.2 Data assessment and gap analysis

Data assessment and gap analysis involves:

- gathering information on the current, upgraded, or new food service landscape, including current food service systems and menu in place at an existing health service, or
- making decisions about the food service system at a new health service, and
- gathering information on the current, or predicted, patients and residents of the health service, and
- identifying gaps in the available data on food service systems and menus needing to be rectified through the menu planning process.

Population

Identify/evaluate current or predicted population-specific requirements:

- demographics (average age and weight)
- major cultural and/or religious representation and/or food beliefs
- clinical landscape including overall patient and resident cohort, and identified subpopulations with specific or differing needs (e.g. maternity, long-stay rehabilitation, short-stay or day procedures, paediatrics or those requiring TM food/fluids)
- average length of stay
- physical needs – for example, specialist eating equipment or assistance with eating.

Gap analysis

- Do I have a clear picture of the health service population's demographics, clinical, physical, and psychosocial needs in order to make health service–specific decisions during the menu planning process and to build the baseline diet?
- Do I have a clear idea of how many therapeutic diets I need?
- Do I need to consider outsourcing supply for culturally diverse, TM or therapeutic menu options?

Food service systems

Identify/evaluate the current or planned landscape for the base food service system and potential additions or modifications:

- preparation method for the baseline diet (cook-chill, cook-freeze, cook-fresh or hybrid) and consideration of outsourcing additional items such as TM food and fluids and culturally diverse menu options
- centralised or decentralised plating method
- menu cycle duration
- ordering system – electronic, spoken, paper, hybrid
- timing of choice/ordering lead-time – for example, same day
- standard meal pattern – for example, three meals and three snacks or room service
- out-of-hours' food access – for example, ward or patient fridge
- supply and procurement processes, limitations, budget constraints and potential scope for expanding product lines
- spatial capacity and limitations – storage, tray-line, prep stations including area for preparing or handling low-allergen meals
- specialist equipment required for texture modification
- meal delivery and dining environment.

Gap analysis

- Do I understand all steps of the food service system at my health service?
- Do I have a good understanding of any limitations associated with each step of the system?

Personnel/staff

Identify/evaluate the current capabilities and availability of staff who are involved in the following roles:

- food service staff – chefs/cooks, manager, food service assistants, menu monitors, tray-line, delivery people (this could include personal services or care assistants)
- dietitian with food service expertise
- menu planning/review stakeholders for adequate multidisciplinary representation
- health service and food service management, financial and quality reporting.

Gap analysis

- Do I have adequate resourcing in place to complete the necessary steps to fulfil the menu planning process?
- Do I have adequate representation from food service, consumer, management and clinical (speech pathology and dietetics) to undertake a successful menu planning process?

Risk/quality compliance

Identify/evaluate the compliance of food service to risk and quality frameworks:

- the Standards outlined in section 3
- ACQS[8]/NSQHS[3]
- food safety standards
- National Allergy Strategy and site-specific allergy policy
- TM food and fluids / IDDSI
- *Environmental sustainability strategy*[114]
- site-specific policies and guidelines – for example, day patients, out-of-hours' food policy, food from home.

Gap analysis

- Are all current recipes standardised?
- Is a dietitian-validated nutrition analysis available for all recipes and portion control (PC) products?
- Can you categorise your current recipes into 'bands'?
- How many Band 1, 2 and 3/non-banded recipes/products are there and what are the proportions of each?
- Does your menu meet the minimum menu choices for all categories?
- Does the menu meet the energy and protein minimum for the baseline diet?
- Do you have processes (training, documentation of processes) and policies in place to meet alternative standards relating to food safety and quality as above?

Feedback

Identify/evaluate the outcomes to obtain adequate patient/resident/family feedback and determine appropriate actions:

- complaints or compliments
- meal experience surveys
- patient/resident/family/consumer focus groups
- audits – wastage, tray-line accuracy, Standards compliance
- Victorian Health Engagement Survey / health service–specific patient experience survey data
- incident reporting and action plan – for example, RiskMan reporting and Victorian Health Incident Management System submissions.

Gap analysis

- Do I have the results available from previous audits and patient/resident/family feedback?
- Are there changes identified through feedback data that should be considered? For example, removing high-wastage dishes, removing dishes commonly complained about, increasing the rotation of popular desserts.

5.3 Establishing the menu planning/review working group

The process of establishing a multidisciplinary team to drive the menu planning process and guiding implementation aligned with these Standards involves:

- assigning roles and responsibilities to each member of the team (Table 4)
- ensuring collaboration between members with shared responsibilities
- setting up regular meetings to discuss progress, timelines, delays, barriers and to evaluate against feedback data.

Table 4: Menu planning/review working group members

Typical member	Roles and responsibilities
Food service or non-clinical support services manager	• Procurement • Financial reporting • Evaluating patient/resident/family feedback and incident reports • Food service/meal quality oversight, which may include undertaking, or delegation of, quality auditing requirements
Chefs/cooks (in-house or from CPK)	• Standardised recipe development • Item selection • Baseline menu build (in collaboration with the food service dietitian) • Food service/meal quality oversight, which may include undertaking, or delegation of, quality auditing requirements
Food service dietitian (a dietitian role with dedicated food service EFT)	• Assessment of menu compliance to these Standards • Standardised recipe development and assessment of compliance to nutrient banding via nutritional analysis • Item selection and assessment of compliance to nutrient banding via assessment of specification sheets • Baseline menu build (in collaboration with the chef/cook/CPK) in accordance with population-specific requirements • Evaluate patient/resident/family feedback and incident reports • Food service/meal quality oversight, which may include undertaking, or delegation of, quality auditing requirements
Speech pathologist	• Assessment of TM food and fluids compliance to IDDSI framework • Contribute to recipe development for TM food and fluids

5.4 Planning

Planning involves:

- rectifying gaps in the current menu as identified in previous steps
- developing standardised recipes and acquiring the additional PC items required to support a menu that complies with these Standards
- drafting and finalising a menu (new or reviewed) that complies with these Standards while offering variety and quality food
- engaging and consulting with key stakeholders throughout the menu planning/review process including trialing dishes, modifying recipes based on feedback or replacing with alternative dishes where required.

Planning the menu

Identify/evaluate how many dishes need to be developed or reworked to build the new or updated menu grid (e.g. number of soups, meals, desserts, sandwiches, or snacks).

Refer to the nutrient banding and minimum menu choice tables in section 4.

Gap analysis

- How many Band 1, 2 or 3/Unbanded recipes/products do I currently have?
- Does my menu include the required percentages for Band 1 and Band 3/Unbanded?
- How many hot breakfast recipes do I have?
- How many cold high-protein breakfasts do I have?
- Does my menu cater for seasonal changes?
- How many new or reworked recipes are required to meet the minimum menu choice and nutrient banding requirements of these Standards?

Output

- Number of new/reworked recipes required to meet minimum menu choice and nutrient banding requirements.

Recipe development and analysis

- Brainstorm meal and snack ideas that will meet nutrient banding requirements and the needs of the health service population.
- Brainstorm TM food and fluids ideas that will meet nutrient banding requirements and the needs of the health service population.
- Draft recipes for meals and analysis of nutritional value. Refer to Appendix 9 for how to conduct a recipe analysis. Appendix 9
- Have the menu planning team and patients/residents conduct taste and quality testing.
- Refine recipes based on feedback.
- Have the menu planning team carry out final testing.
- Develop final standardised recipes.
- Purchase ingredients, ensuring packaged/processed ingredients have their nutritional profile provided.
- Undertake a final nutritional analysis of the standardised recipes.

Product/items assessment and analysis

- Brainstorm potential portion-controlled items which will serve as meals, desserts or snacks which would meet the nutrient banding.
- Acquire product specification sheets from potential suppliers.
- Analyse specifications and select items which meet the nutrient banding.
- Acquire samples of select items from suppliers.
- Taste and quality testing by menu planning team and consumer representatives.
- Consider feedback in final selection of PC items. If samples selected to test are unsuccessful; repeat steps outlined above.
- Once portion-controlled items are finalised, undergo a final procurement process, and ensure nutritional analysis of items are available.

Develop menu structure/grid

- Identify how long your menu cycle currently is, or will be (for new menus).
  - A minimum of seven days is recommended, but many health services may have 14–28-day cycles.
  - If you have a room service system, identify the minimum number of dishes per day per band to meet proportions (variety to be provided within a week will not apply).
  - Paediatric menus and/or paediatric short order menus should comply with the minimum menu choices stipulated in the *Nutrition and quality food standards for paediatric patients in Victorian hospitals* (variety to be provided within a week does not apply). Refer to Appendix 2 of the *Nutrition and quality food standards for paediatric patients in Victorian hospitals* for a case study showing how an adult health service menu can cater to paediatric patients.
- Draft your menu (or menu grid) using your standardised recipes and selected items, ensuring they comply with the Standards (section 3), nutrient banding and minimum menu choice (section 4). Refer to Appendix 10 for seven-day menu grid examples.
- Menu grids should be completed for all required textures to ensure suitability of any menu modifications.
- Using nutrition analysis software with standardised recipes and specification sheets, review your menu grid against the average energy and protein requirements of the health service population and against NRVs[93] for micronutrients as per the needs identified for your health service population. Refer to Appendix 11 for an example nutrition analysis.
- Identify any significant nutritional inadequacies and adjust the grid or a specific recipe/item as required.

5.5 Evaluation and quality

Evaluation is a fundamental step in CQI that will help evolve a menu and food environment to be continuously suited to a health service population. There are multiple CQI frameworks. Langley et al.[18] defines the process in four steps: plan, do, study and act. Refer to Figure 3 for the details of each step.

Ultimately CQI is the process of deciding how to collect data on the impact or response to changes made, collecting and reviewing the data, and then deciding on whether to continue with change, adapt change or make new changes to the menu.

Decide how changes to menu (or meal environment) will be reviewed (what data will be collected and how it will be collected). Refer to Standard 3.1 for recommended CQI activities. The same audit tool selected to collect data should be used across multiple time points. This ensures change measured and comparisons made are valid and can be used to inform change and support advocacy efforts. Refer to Appendix 7 for quality audit tools.

- Patient/resident/family feedback
  - feedback sessions – can include taste testing
  - point-of-service satisfaction surveys
  - compliments/complaints
- Food wastage
  - weighed wastage audits (patient/resident level)
  - visual wastage audits (patient/resident level)
  - continuous wastage monitoring (kitchen level)
  - stock reports (kitchen level)
- Quality
  - tray-line and/or point-of-service quality audits (accuracy, presentation, taste, temperature)
- Menu
  - assessment of compliance to relevant standards.

The steps involved in a quality review process are:

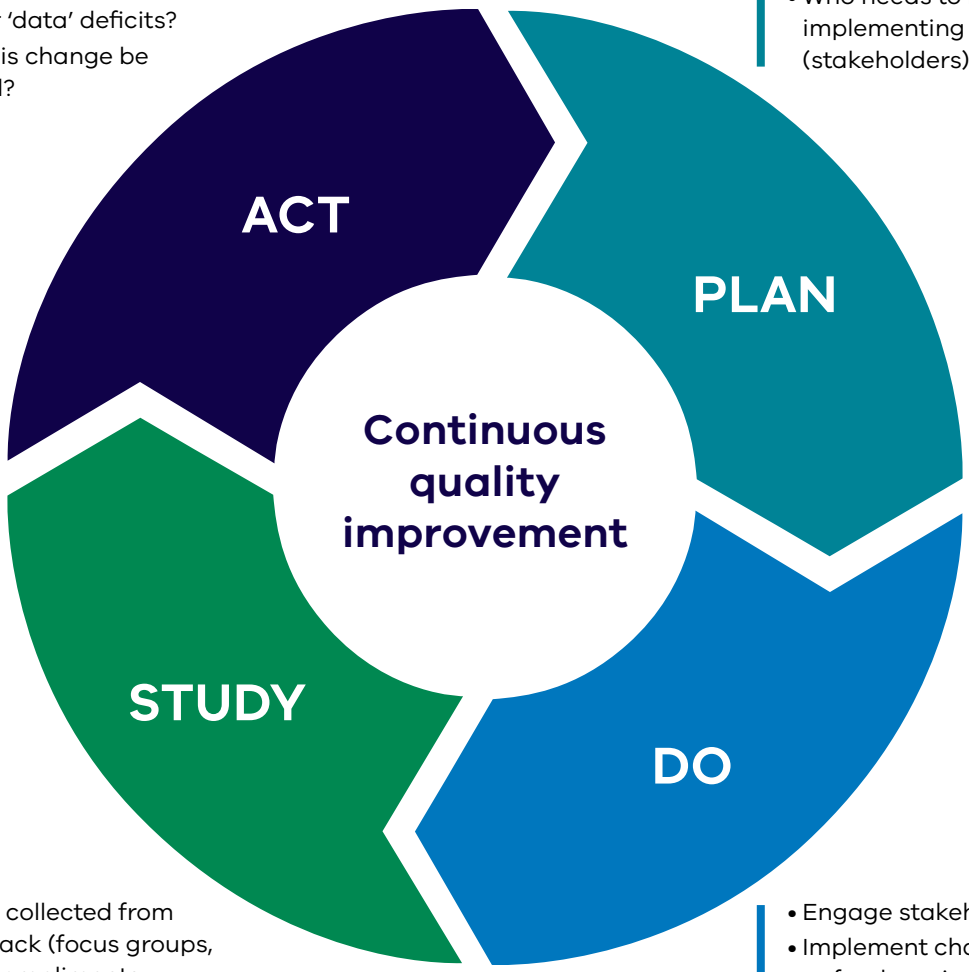
1. Collect the data.
2. Review the data collected and report to the Nutrition Steering Committee and Menu Planning Working Group.
3. Decide what further changes need to be made or should be considered.
4. Decide how these changes can be implemented.
5. Implement changes.
6. Communicate any changes that were based on patient/resident/family feedback back to participants.
7. Repeat steps 1–6.

Figure 3: PDSA cycle for menu planning

Adapted from Langley et al.[18,19]

- Which change or intervention in the menu or food service system should be selected to help address deficits in the 'data'?
- Should a change be adapted or abandoned based on the 'data'?
- What evidence is there for this change/intervention selection to address your 'data' deficits?
- How could this change be implemented?

- How will this change be implemented?
- How will this change be addressed for effectiveness?
- Which data collection methods will be utilised to assess change?
- When will this change occur?
- Who needs to be involved in implementing the change (stakeholders)?



- Analyse data collected from audits, feedback (focus groups, complaints, compliments, satisfaction surveys) and compliance gaps.
- What parts of the menu or food service system need to be addressed/improved? OR
- What was the impact of a change already made?
- Was the change effective in changing the data?

- Engage stakeholders
- Implement changes to menu or food service systems
- Collect data in response to change.

Appendices

Appendix 1: Sustainable food waste reduction strategies

The following information is presented as a guide to sustainable ways to reduce food waste in health services. The information is relevant to:

- organisational management
- facilities or non-clinical support management
- food service management
- chefs/cooks
- food service dietitians.

Background

Halving global food waste by 2030 is Goal 12.3 of the United Nations (UN) Sustainable Development Goals (SDG).[42] To support collective action required to meet this SDG, the Australian Government published the *National food waste strategy* in 2017, which aligns with the sustainable consumption and production patterns outlined by the UN strategy.[160] It is well evidenced that hospital food services can contribute significant carbon emissions at each stage of the food supply chain, having potential adverse environmental impacts. When excess food is sent to landfill, the resources involved in getting the food from paddock to plate are also wasted. This includes growing, processing, transporting, refrigeration and cooking.[41–43] Health services should look at reducing waste at every stage of the food supply chain, not just addressing food waste within their service.

Victorian public health services are required to have a whole-of-organisation environmental management plan that aligns with the *Climate Change Act 2017* (Vic) in order to reach the target for net carbon zero production by 2050.[44] As a minimum, health services are required to publicly report on environmental performance data relating to carbon, energy, water, waste and transport.[161] Health services should consider setting up an environmental sustainability committee, including (at minimum) senior management representatives, facilities or non-clinical support management, operations, purchasing, OH&S representatives, and anyone else required to lead and support effective and sustainable waste management practices in the health service.[162]

Environmental sustainability strategy

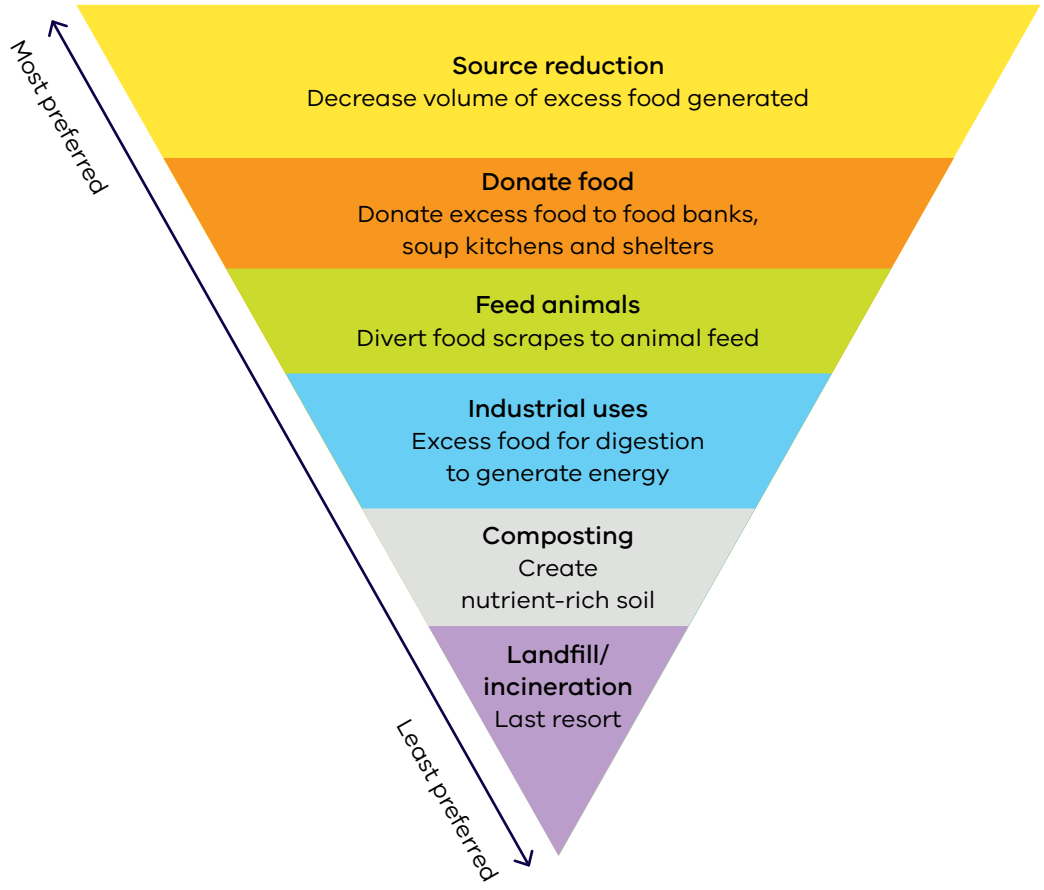
The Victorian Government's *Sustainability in Healthcare – Environmental sustainability strategy 2018–19 to 2022–23* commits to supporting health services to adapt and further improve their sustainability practices through some of the following approaches:[44]

- developing a sustainable procurement policy and action plan to embed sustainability into health sector procurement
- working with HealthShare Victoria to improve waste management practices and recycling opportunities across the public health system
- working with the Victorian Health Building Authority to develop strategies to divert organics (e.g. food waste) away from landfill. A number of Victorian hospitals have already managed to successfully divert organics from landfill, with support from the Victorian Health Building Authority and Metropolitan Waste and Resource Recovery Group.

Food recovery hierarchy

The food recovery hierarchy, shown in Figure 4, prioritises different methods for managing surplus food. The top levels of the hierarchy represent the best strategies for diverting or preventing food waste because they create the most benefit for the environment, society and the economy.[41,48]

Figure 4: Food recovery hierarchy



Adapted from the United States Environmental Protection Agency[48]

Health services should assess their current waste management practices to better understand the type of waste produced and what can be done to potentially divert it from landfill. Table 5 outlines methods for managing surplus food based on the food recovery hierarchy.

Table 5: Methods for management of surplus food based on the food recovery hierarchy

Hierarchy level	Methods
Source reduction	• Conduct a waste audit to identify the amount, type and reason for generating wasted food[46] • Change menus/recipes based on unpopular meals • Review production and handling methods to prevent and reduce preparation waste • Ensure food is stored properly • Reuse excess food produced by adding it to new dishes (e.g. using stale bread for croutons or fruit as dessert toppings) **Resources on conducting food waste audits:** Waste audit guidelines <https://www2.health.vic.gov.au/hospitals-and-health-services/planning-infrastructure/sustainability/waste/audit-guidelines> Consensus pathway food waste audit <https://onlinelibrary.wiley.com/doi/10.1111/jhn.12928?af=R>
Donate food	• This is a good option if there are sufficient quantities of good quality and fresh food on a regular basis that cannot be used or served in time. • Food charities will not collect food that is not suitable for human consumption.[49] • The *Wrongs & Other Acts (Public Liability Insurance Reform) Act 2002* offers indemnity to organisations who donate safe food to charities.[163,164] Victorian Government guide to donating food <https://www.health.vic.gov.au/food-safety/donating-food> **Victorian food donation charities:** Foodbank <https://www.foodbank.org.au/support-us/make-a-donation/donate-food/?state=vic> OzHarvest <https://www.ozharvest.org/food/give-food/> Food for Change <https://foodforchange.org.au/rescue/donate-food/> FareShare <https://www.fareshare.net.au/> SecondBite <https://www.secondbite.org/donate-food> A good resource for smaller kitchens is www.askizzy.org.au/food, a directory of local food-related charities searchable by post code and program type, that may be able to take food donations. Check with your local council for the closest food donation charity to your health service.
Feed animals/ worms	• Discuss these specific options for diverting organics away from landfill with the waste management provider linked to your health service, or the Victorian Health Building Authority. • Some PSRACS, particularly in rural/regional areas, may have animals such as chickens to feed organic waste to. **Worm farm** Worms are natural food recyclers. They digest, burrow and turn over food, creating two natural by-products: worm juice and worm manure (castings). These by-products are excellent for returning nutrients from the food and worms back to the soil.[49,165] Victorian Government: *Victorian food organics recycling guide* (pp. 19–21) <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-food-organics-recycling-guide>

Hierarchy level	Methods
Industrial uses	Discuss these specific options for diverting organics away from landfill with the waste management provider linked to your health service, or the Victorian Health Building Authority. **Anaerobic digestion system**[160,165] • Happens in an enclosed space in the absence of oxygen • Relies on microorganisms eating their way through biodegradable material in the absence of oxygen • Produces biogas (which can be used for energy) and digestate (a nutrient-rich residue that can be used as a fertiliser or soil) • Most complicated option for processing food waste Victorian Government: *Victorian food organics recycling guide* (pp. 25–27) <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-food-organics-recycling-guide>
Composting	Discuss these specific options for diverting organics away from landfill with the waste management provider linked to your health service, or the Victorian Health Building Authority. **Dehydrating unit**[165] • Removes moisture through the dehydration of food waste • Produces a dry biomass that can be used as a compost for gardens or generates energy through incineration • Useful for health services with a large production of food waste **In-vessel composting**[165] • Involves using an enclosed vessel to speed up decomposition and energy (electricity or gas) for temperature control and monitoring • Good for sites with moderate to large and regular quantities of food and/or garden waste Victorian Government: *Victorian food organics recycling guide* (pp. 19–25) <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-food-organics-recycling-guide>
Landfill/ incineration	• Least preferred option • Usually involves incineration without producing a useful end-product • Food waste may go to sewer

For more about waste reduction strategies, refer to the below resources or speak to the department that manages waste at your health service.

- *Sustainability in Healthcare – Environmental sustainability strategy 2018–19 to 2022–23* <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/environmental-sustainability-strategy-2018-19-to-2022-23>
- Health service environmental requirements and environmental planning <https://www2.health.vic.gov.au/hospitals-and-health-services/planning-infrastructure/sustainability/planning-reporting>
- *Victorian food organics recycling – a guide for small-medium food services organisations* <https://www2.health.vic.gov.au/about/publications/policiesandguidelines/victorian-food-organics-recycling-guide>
- The Metropolitan Waste and Resource Recovery Group <https://www.mwrrg.vic.gov.au/>
- *National waste strategy: halving Australia's food waste by 2030* <http://www.environment.gov.au/system/files/resources/4683826b-5d9f-4e65-9344-a900060915b1/files/national-food-waste-strategy.pdf>
- United Nations Sustainable Development Goals <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

Appendix 2: Useful links

Topic	Links (valid at the time of publication)
National standards, guidelines and resources	**National Safety and Quality Health Service (NSQHS) Standards** Australian Commission on Safety and Quality in Health Care <https://www.safetyandquality.gov.au/standards/nsqhs-standards> **Aged Care Quality Standards** Aged Care Quality and Safety Commission <https://www.agedcarequality.gov.au/providers/standards> **Food Standards** Food Standards Australia New Zealand (FSANZ) <https://www.foodstandards.gov.au/code/Pages/default.aspx> FSANZ food safety programs for food service to vulnerable persons: a guide to Standard 3.3.1 (2008) <https://www.foodstandards.gov.au/code/userguide/Documents/Std%20331-Food%20Safety%20Prog%20Vul%20Pers-guideFNL1.pdf> **Food safety** Victoria State Government <https://www.health.vic.gov.au/public-health/food-safety> **Nutrient Reference Values for Australia and New Zealand** National Health and Medical Research Council and NZ Ministry of Health <www.nrv.gov.au/> **Australian Dietary Guidelines and Australian Guide to Healthy Eating** National Health and Medical Research Council and Australian Government Department of Health <www.eatforhealth.gov.au/guidelines>
Texture modified and mealtime assistance resources	**International Dysphagia Diet Standardisation Initiative (IDDSI)** IDDSI framework <https://iddsi.org/framework/> **Communicating safe eating and drinking – best practice guidance** Safer Care Victoria <www.bettersafercare.vic.gov.au/sites/default/files/2020-06/Guidance%20_%20Communicating%20safe%20eating%20and%20drinking.pdf> **Dysphagia, safe swallowing, and mealtime management** NDIS Quality and Safeguards Commission <https://www.ndiscommission.gov.au/sites/default/files/documents/2020-11/practice-alert-dysphagia-safe-swallowing-and-mealtime-management.pdf>
Menu and quality audit tools	Refer to Appendix 7 for tools, resources and links, enabling health services to establish an audit schedule.

Topic	Links (valid at the time of publication)
Food allergy management	**Food allergy awareness** Providing resources on food allergies for the community, food services and health professionals, including specific All about Allergens for Hospitals online training modules. The Food Allergy Awareness project <www.foodallergyaware.org.au/> is supported by the following entities: National Allergy Strategy <https://nationalallergystrategy.org.au/> Allergy & Anaphylaxis Australia (A&AA) <https://allergyfacts.org.au/> Australasian Society of Clinical Immunology and Allergy (ASCIA) <https://www.allergy.org.au/> Victorian Department of Health food safety food allergen webpage <https://www.health.vic.gov.au/food-safety/food-allergen-awareness> FSANZ Food allergen portal <www.foodstandards.gov.au/consumer/foodallergies/foodallergenportal/Pages/default.aspx> Allergen Bureau resources <http://allergenbureau.net/> (includes a risk review resource and information on reference doses)
Dietitians Australia member links	The following documents can be found in the Resource Library of the Dietitians Australia website: **Aged care quality standards toolkit for APDs** <https://member.dietitiansaustralia.org.au/Common/Uploaded%20files/DAA/Resource_Library/2020/Aged_Care_Quality_Standards_ToolkitDec2020.pdf> Provides a quick reference on targeted strategies that are relevant to the ACQS[8] for Accredited Practicing Dietitians (APDs) working within aged care organisations. **Menu and mealtime quality assessment for residential aged care** <https://member.dietitiansaustralia.org.au/Portal/Membership/Resource-Library/Resource-Content/709.aspx?seqn=709> For exclusive use by APDs, to provide aged care homes with an assessment of their nutrition care, menu and mealtime experience, using the ACQS[8] as the framework.
Cultural diversity	These websites provide useful tools and resources to assist in developing appropriate menus and sourcing culturally appropriate foods: Kosher Authority <https://www.ka.org.au/understanding-kosher/guide-kashrut> Jewish Australia <http://www.jewishaustralia.com/food.htm> Islamic Council of Victoria <https://www.icv.org.au/about/about-islam-overview/what-is-halal-a-guide-for-non-muslims/> Kosher Australia <www.kosher.org.au> Religious events calendar <http://www.faithvictoria.org.au/resources/religions>
Breastfeeding	**Eat for health: infant feeding guidelines information for health workers** National Health and Medical Research Council and Australian Government Department of Health <www.nhmrc.gov.au/about-us/publications/infant-feeding-guidelines-information-health-workers> **Baby-friendly hospitals** Hospitals are encouraged to adopt a baby-friendly hospital program <https://www.who.int/activities/promoting-baby-friendly-hospitals>.

Topic	Links (valid at the time of publication)
Meal environment/ experience	The Victorian Health Building Authority PSRACS facility design guidelines (interim) <https://www.vhba.vic.gov.au/public-sector-residential-aged-care-services-interim-facility-design-guidelines> The Department of Health Dementia friendly environments resource <https://www.health.vic.gov.au/dementia-friendly-environments/dining-areas-kitchens-and-eating> The Lantern Project <https://thelanternproject.com.au>
Sustainable waste reduction tools	Refer to Appendix 1 for tools, resources and links supporting sustainable strategies to reduce food waste in your health service.
Nutrition analysis tools	**FoodWorks** Xyris Pty Ltd Product information <https://xyris.com.au/resources/> User guides <https://support.xyris.com.au/hc/en-us/categories/200366565-Using-FoodWorks-Professional> Training videos <https://support.xyris.com.au/hc/en-us/articles/360001361816-Tutorial-Videos-for-FoodWorks-Professional> **Weight change factors** Food Standards Australia New Zealand <https://www.foodstandards.gov.au/industry/npc/Pages/weight-change-factors.aspx> **Nutrient retention factors** United States Department of Agriculture <https://www.ars.usda.gov/northeast-area/beltsville-md-bhnrc/beltsville-human-nutrition-research-center/methods-and-application-of-food-composition-laboratory/mafcl-site-pages/nutrient-retention-factors/> **Weight yield and nutrient retention factors** Federal Research Center for Nutrition and Food (Germany) <http://www.fao.org/uploads/media/bognar_bfe-r-02-03.pdf>

Appendix 3: Food First – food fortification strategies with example recipes

The following information is presented as a guide to the Food First approach and the process of food fortification. The information is relevant to:

- food service managers
- chefs/cooks
- food service dietitians.

Food First / food fortification principles

1. **Small and frequent:** Meeting nutrition requirements by providing small, but frequent, high-energy, high-protein snacks and meals.
2. **High energy, high protein:** Selecting and offering foods naturally high in energy and protein rather than low-fat, low-sugar or low-protein products – for example, selecting full-fat dairy products over low-fat, cheese and biscuits instead of potato chips or chocolate biscuits, and milkshakes/smoothies instead of cordial or juice.
3. **Food fortification:** Using foods that are naturally high in energy and protein to fortify recipes, meals and snacks to improve their nutritional content. Food fortification should be incorporated where appropriate throughout the menu cycle. For examples, refer to 'Food fortification process' below.
4. **Availability and promotion:** Offering snacks, meals and desserts that are higher in energy and protein, as well as having these foods and drinks readily available and promoted over less nutritious alternative options – for example, yoghurt over sweet biscuits.
5. **Supportive meal environment:** The meal environment supports the Food First approach by having staff available who are trained in basic malnutrition prevention principles – for example, staff promoting and encouraging eating yoghurt over biscuits, the meat or meat alternative portion of a meal first, and the starch portion of a meal before non-starch vegetable.

Food fortification process

1. **Choosing the goal of food fortification. What are you trying to achieve?**

General goals of food fortification in hospitals and aged care

- To increase energy/protein intake without an excessive increase in volume or additional food.
- To increase both energy and protein in a meal that has been texture modified (losses occur with the texture modification process)
- To provide adequate fibre

2. Choosing an ingredient – Which ingredient has the specific nutrients that will support my goal for food fortification?

Table 6: Ingredients for food fortification

Ingredients for increasing energy	
• Oils (olive oil, rapeseed oil, sesame oil)	• Double cream
• Change from skim milk to full cream milk	• Sour cream
• Honey	• Grains (pasta, rice, barley, quinoa)
• Hydrolysed starch	• Sugar
• Pureed fruit	• Dried fruit
• Chocolate	• Cream
• Avocado	• Nuts or nut meal/spreads
• Margarine/butter	• Seeds (pumpkin, sunflower, flaxseed, chia, sesame)
Ingredients for increasing protein	
• Milk powders (full cream, skim and lactose-free)	• Meat, poultry, fish
• Protein powders (dairy or plant-based)	• Tofu
• TVP	• Cheeses
• Nutritional yeast	• Cheese sauce
• Yoghurt	• Milk
• Lentils/legumes	• Eggs
Ingredients for increasing fibre	
• Dried fruit (apricots, prunes, sultanas)	• Ground linseeds, sesame seeds and almonds (LSA)
• Grains/cereals (pasta, rice, barley, quinoa, bran, rolled oats, psyllium)	• Vegetables
• Change from white to wholemeal flour	• Fresh fruit

3. Modify and trial recipes to include the new ingredient or more of a chosen ingredient

Fortification is a process of trial and error that is undertaken collaboratively by the chef, food service dietitian and speech pathologist. Food fortification with texture modified food items is more complex and time-consuming because recipe modification has to account for changes in texture.

Changes to recipes, meals or items are decided collaboratively. Recipes that have been fortified need to be:

- trialed by the chef and dietitian
- trialed by speech pathology if adjusting TM food and fluids adjusted until the dishes and recipes are appropriate from a quality (taste, appearance, smell, texture) and nutritional profile perspective
- involve patient/resident/family representatives for taste-testing purposes (this feedback can also be collected during the implementation phase)
- guided by the needs of the health service, the capacity of the kitchen and the requirements of the recipe or diet.

Food fortification opportunities in your health service

The following questions are designed to identify opportunities to implement food fortification strategies within your health service. This list is by no means exhaustive and is intended to guide and inspire chefs and food service dietitians through the fortification process.

Table 7: Food fortification strategies

Question	Food fortification strategy
What type of milk are you using in your recipes?	• Trial fortified milk for all/some of your recipes (including for tea/coffee) (see recipe at the end of this section) • Trial switching to full cream milk
Which recipes already contain an ingredient that is rich in energy or protein?	• Trial increasing the amount of the ingredient in the recipe: – cheese or cream quantity in a quiche recipe – lentils/beans/pasta in a minestrone soup recipe – chicken in a casserole recipe
Are there ingredients in the existing recipes, that can be substituted for more nutritious alternatives?	• Trial partially or fully substituting with more nutritious ingredients: – full cream milk in place of skim milk – olive oil or egg/cream-based dressings in place of vinegar dressings – wholemeal flour in place of plain flour
Which recipes have milk listed as an ingredient in them?	• Trial substituting: – full cream milk in place of skim milk – fortified milk using skim milk powder or a nutritional supplement – (see recipe at the end of this section) in place of milk
Can some of the existing soup recipes have additional ingredients added?	• Trial adding: – milk, milk powder, cream or sour cream – grains (pasta, barley, rice, quinoa) – lentils or legumes – pieces of meat, pureed meat or fish, or swirled/ribboned egg – Trial serving soup with a boiled egg, grated cheese or sour cream
Can some of the existing dessert recipes have additional ingredients added?	• Trial adding: – milk powder – dried fruit – nuts or nut meal/spreads – seeds – dried fruit to cake or pudding recipes

Question	Food fortification strategy
What sauces/ garnishes/sides are being used, and are they serving your fortification goal?	• Trial adding or increasing sauces or garnishes: – drizzle of honey and/or yoghurt on breakfast cereal or fruit – sliced fruit garnishes on breakfast cereal or desserts – cheese sauce on vegetables – margarine or olive oil on vegetables – olive oil dressing on salads – grated, shaved or crumbled cheese on salads – cream on desserts – custard or ice cream with desserts and fruit – berry coulis with desserts
Is there a milkshake or smoothie recipe?	• Trial: – fortifying with skim milk powder or nutrition supplement powder – increasing ice cream, yoghurt or fruit in recipes – adding nuts (e.g. cashew or almond butter) or seeds (chia, flaxseed, LSA) – adding additional honey or topping – If there is no recipe, create one and trial it on the menu
Are there vegetarian recipes (mains/ soups/breakfast) that are not meeting the banding criteria?	• Trial: – adding TVP to soups or mixed main dishes – increasing the amount of lentils/legumes in recipes – increasing the amount of (or adding) egg to recipes – increasing the amount of (or adding) dairy (e.g. milk, yoghurt, cheese, cream, sour cream) to recipes – adding nutritional yeast to frittatas, quiches, white sauce, salad dressings – additional cheese on top of meals or through sauces – adding plant-based protein powder to recipes – adding coconut milk to recipes
Can more of the side vegetable recipes be fortified?	• Trial adding: – margarine/butter, breadcrumbs, oil to the vegetable recipes – nuts/seeds to vegetable or salad sides – grated cheese or cheese sauce to vegetable recipes – plant-based protein powder
Can more of the side starch recipes be fortified?	• Trial adding: – margarine/butter, milk powder, milk, cream or cheese to mashed potato recipes – dried fruit and nuts to spiced rice recipes – margarine/butter or oil onto other starches (barley, rice, quinoa, cous cous, freekeh, lentils) – honey to carrots or parsnips – egg in rice or pasta side dishes (e.g. stir beaten egg through fried rice) – plant-based protein powder

Question	Food fortification strategy
Are there portion-controlled items where the nutrient profile could be optimised?	• Reach out to current and potential suppliers and review their product specification lists • Trial different portion-controlled items that have a more suitable nutrient profile

Evaluation and quality

The success and uptake of substituted fortified recipes and portion-controlled products should be continuously evaluated against CQI processes to ensure the quality of food and patient and resident satisfaction is maintained.

Table 8: Evaluation and outcomes of CQI

Evaluation strategies
• Review patient/resident/family satisfaction with fortification recipe/meal via CQI processes listed in sections 3.1 and 5.5: – point-of-service satisfaction survey – patient/resident/family focus groups – patient/resident/family representative input as part of the nutrition committee • Wastage comparison of recipe/item before and after the fortification trial

Outcomes from feedback
• Recipe adjustment – trial with more or less of the fortification ingredient • Review fortification agent – consider a new ingredient to use for fortification • Remove recipe – consider a new recipe (with similar components) to modify and trial

Examples of food fortification recipes

Milk

Original recipe	Fortified recipe
Ingredient: 1 L low fat milk **Yield: 10 × 100 mL** **198 kJ / 4 g P / 41 mg Na / 1g sat fat**	**Ingredients:** 1 L full cream milk 1 cup skim milk powder **Method:** 1. Mix 1 cup skim milk powder with 1 cup full cream milk until it forms a paste. 2. Pour in the rest of the milk and stir well. **Yield: 11.6 × 100 mL** **413 kJ / 7 g P / 79 mg Na / 2 g sat fat**

Mashed potato

Original recipe	Fortified recipe
Ingredients: 24 kg peeled chat potatoes 6 L low fat milk **Method:** 1. Steam potato until it is soft and remove from oven. Keep 6 potatoes aside and place into bain-marie. 2. Heat milk to simmer. Empty 3 litres of milk into the large Hobart mixer then place the potatoes in. Add the remaining milk. 3. Turn the speed to mix on number 2 for 3 minutes then stop the machine and change to number 4 speed for a further 3 minutes. 4. Check that all is mixed thoroughly. Empty into half-deep gastronomes and place into the bain-marie. **Yield: 330 × 90 g** **238 kJ / 2 g P / 11 mg Na / < 1 g sat fat**	**Ingredients:** 24 kg peeled chat potatoes 6 L fortified full cream milk (6 cups skim milk powder) 5 cups shredded parmesan cheese **Method:** 1. Steam potato until it is soft and remove from oven. Keep 6 potatoes aside and place into bain-marie. 2. Heat fortified milk to simmer. Empty 3 litres of milk into the large Hobart mixer then place the potatoes in. Add the remaining milk. 3. Turn the speed to mix on number 2 for 3 minutes then stop the machine and change to number 4 speed for a further 3 minutes. 4. Check that all is mixed thoroughly. Empty into half-deep gastronomes and place into the bain-marie. 5. Sprinkle over parmesan cheese. **Yield: 330 × 96 g** **301 kJ / 4 g P / 48 mg Na / 1 g sat fat**

Fortified pureed broccoli

Original recipe	Fortified recipe
Ingredient: 450 g frozen broccoli	**Ingredients:** 450 g broccoli 2 tbsp no-added-salt margarine ½ cup thickened pouring cream Pinch pepper
Method: 1. Defrost the vegetable then place into robot coupe and blend into a smooth paste. You may have to add a little cold water to assist with blending. 2. Place mix into a small gastronome tray. Cover with a lid and steam until the temperature reaches 75 degrees or above.	**Method:** 1. Separate broccoli crowns into florets and peel stalks. Cut into 1 cm pieces. 2. Bring a large pot of water to boil. Cook broccoli until softened, ~ 6 mins. 3. Melt margarine, add broccoli, cook for 2 mins. 4. Pour in cream and cook over low heat until broccoli is soft, ~ 10 mins. Season with pepper. 5. Puree broccoli until smooth.
Yield: 6 × 75 g **84 kJ / 2 g P / 14 mg Na / < 1 g sat fat**	**Yield: 8 × 77 g** **446 kJ / 3 g P / 14 mg Na / 1 g sat fat**

Minestrone soup

Original recipe	Fortified recipe
Ingredients: 100 mL vegetable oil 1.5 kg diced onion 1.5 kg diced carrots 1.5 kg diced celery 1.5 kg peeled chat potatoes 1.5 kg diced turnip 1.2 kg kidney beans 1 kg leek 1 kg silverbeet 100 g crushed garlic 100 g fresh parsley 100 g dried mixed herbs 700 g tomato puree 9 kg crushed tomatoes 450 g vegetable stock powder 35 L tap water 1.5 kg macaroni pasta	**Ingredients:** 100 mL vegetable oil 1.5 kg diced onion 1.5 kg diced carrots 1.5 kg diced celery 1.5 kg peeled chat potatoes 1.5 kg diced turnip 400 g black beans 1.2 kg soybeans 1 kg leek 1 kg silverbeet 100 g crushed garlic 100 g fresh parsley 100 g dried mixed herbs 700 g tomato puree 9 kg crushed tomatoes 450 g vegetable stock powder 35 L tap water 1.5 kg wholemeal macaroni pasta 500 g parmesan cheese, finely grated
Method: 1. Sauté onion, carrot, celery, garlic and cook without colouring. 2. Add stock, crushed tomato, tomato puree and bring to the boil. 3. Add potato, turnip, kidney beans, leek, macaroni, silverbeet and herbs and bring back to the boil. 4. Simmer until pasta and vegetables are tender 5. Add parsley and serve.	**Method:** 1. Sauté onion, carrot, celery, garlic and cook without colouring. 2. Add stock, crushed tomato, tomato puree and bring to the boil. 3. Add potato, turnip, black beans and soybeans, leek, macaroni, silverbeet and herbs and bring back to the boil. 4. Simmer until pasta and vegetables are tender. 5. Add parsley and serve, sprinkling parmesan on each serve.
Yield: 240 × 180 mL **217 kJ / 2 g P / 400 mg Na / < 0 g sat fat**	**Yield: 220 × 200 mL** **295 kJ / 4 g P / 454 mg Na / 1 g sat fat** Chicken, TVP, bacon or increased oil could be added as further fortification.

Custard

Original portion-controlled serve	Fortified recipe
Ingredients: ¼ cup custard powder 2½ cups low fat milk 2 tbsp caster sugar	**Ingredients:** 300 mL full cream milk 40 g skim milk powder 3 large egg yolks 3 tbsp cornflour 3 tbsp caster sugar 10 mL vanilla essence
Method: 1. Combine custard powder and ¼ cup of milk in a small saucepan and stir until smooth. 2. Add caster sugar and remaining milk and place on medium-low heat. 3. Stir custard continuously until it starts to boil and thickens. 4. Simmer while stirring for 1 min.	**Method:** 1. Whisk skim milk powder into milk, ensuring no chunks remain. 2. Whisk egg yolk and cornflour to smooth paste with a little bit of milk. 3. Place remaining milk and caster sugar into a separate microwave-safe bowl. 4. Heat milk in microwave until it boils. 5. Remove from microwave and add yolk, cornflour and milk paste. 6. Whisk until thick and add vanilla bean extract to taste and divide into 4 bowls.
Yield: 6 × 118 g **362 kJ / 4 g P / 71 mg Na / 1 g sat fat**	**Yield: 4 × 118 g** **807 kJ / 8 g P / 77 mg Na / 3 g sat fat**

Appendix 4: Micro and macronutrient goals

The following tables detail the daily goals for providing a selection of key macronutrients and micronutrients, as recommended in the Nutrient Reference Values for Australia and New Zealand.[93,103] By meeting these key nutrients it is likely the NRV recommendations for the other micronutrients not listed in the tables below will also be met, apart from vitamin D (which relies on UV exposure as well as dietary intake). By applying these Standards, incorporating specific banding proportions and minimum menu choices, menus across hospitals and PSRACS should meet macronutrient goals on a daily basis and micronutrients on a weekly basis.

The reference person differs significantly between hospitals and PSRACS. However, when calculations are applied based on hospitals (105 kJ/kg or 25 kcal/kg and 1.0 g/kg protein) and PSRACS (125 kJ/kg or 30 kcal/kg and 1.2 g/kg protein) the resulting energy and protein requirements are very similar. To ensure the nutrition of PSRACS residents stays consistent on hospital admission, the minimum for the baseline diets have been set at the same level.

Table 9: Reference person for nutrition reference values

Metric	Hospitals	PSRACS
Gender	Male	Male
Age	51–70 years	> 85 years
Weight	80 kg	68 kg
Height	174 cm	165.4 cm
BMI	26.4 kg/m^2	24.9 kg/m^2

Table 10: Macronutrients

Nutrient	Goal	Menu strategies
Energy	8.5 MJ/d	• A wide variety of items of varying energy density should be available. • Provide a range of serve sizes. • Baseline diet provides adequate energy and protein in the smallest serve size. • Provision of fortified or high-energy foods and fluids should be considered.
Protein	85 g/d	• Provide a range of serve sizes. • Baseline diet provides adequate energy and protein in the smallest serve size. • High-protein snacks provided. • Provision of fortified high-protein foods and fluids should be considered. • A variety of plant-based protein should be incorporated into the baseline diet (e.g. tofu, TVP, tempeh, pulses and legumes).
Fat[93]	20–35% total daily energy < 10% saturated/trans fats	• Use mono- and poly-unsaturated fats in food preparation, using margarine or vegetable oils instead of butter. • Offer a choice of mono- and poly-unsaturated spreads, using margarine instead of butter. • Use lean meats and skinless poultry. • Limit processed meats.
Carbohydrate[93]	45–65% total daily energy	• Offer a variety of grain sources including wholegrain options such as breads, breakfast cereals, oats, rice, pasta, noodles, buckwheat, barley, semolina, polenta or quinoa. • Offer fruit and vegetables and include pulses and legumes. • Limit foods containing high amounts of added sugars. • Avoid sugar-sweetened drinks.
Fibre[93]	30 g/d	• Offer high-fibre breakfast cereal choices (3 g / 100 g). • Offer wholemeal and multigrain bread in addition to white bread; consider high-fibre white bread. • Include pulses, legumes, nuts and seeds. • Offer a variety of vegetables both raw and cooked. • Offer a variety of fruit – fresh, canned and dried.
Fluid[93]	Adequate intake of 2.6 L/d	• Water should be available at the bedside for all patients where clinically suitable. • Offer a range of hot and cold beverages at every meal and mid-meal. • Fluids include plain water, tea, coffee, milk, fruit juice and other drinks. • Avoid sugar-sweetened drinks.

Table 11: Micronutrients

Nutrient	Target	Menu strategies
Sodium[93]	Suggested dietary target (SDT) 2,000 mg/d Nil UL determined for adults	• Provide daily menu selections (three meals + snacks) available to be within the SDT. • Minimise highly processed foods (e.g. salted crackers and cured/processed meats such as bacon, salami and sausages). • Use reduced-salt versions where available. • Enhance flavour with herbs, spices and lemon. • Aim for bread with < 400 mg sodium per 100 g.
Calcium[93]	Recommended daily intake 1,000–1,300 mg 1,000 mg for men up to 70 years and women 19–50 years 1,300 mg for men > 70 years and women > 50 years	• Include dairy-based desserts. • Yoghurt to be available throughout the day. • Use fortified plant-based dairy alternatives. • Dairy or fortified plant-based dairy alternative drinks to be readily available.
Iron[93]	Recommended daily intake 8–18 mg 8 mg for men 19–70 years and women 51–70 years 18 mg for women 19–50 years	• Red meat should not be relied on as the sole source of iron. Other animal sources include poultry, fish and canned tuna, salmon or sardines. • Cook plant-based sources of iron to increase bioavailability (e.g. spinach and cabbage). • Combine foods that are high in vitamin C with plant-based iron sources to maximise iron absorption (e.g. cooking tomatoes with soybeans, or adding orange/mandarin slices to a spinach salad). • Use iron-fortified grains (e.g. wholegrain pasta and bran-based cereals).
Zinc[93]	Recommended daily intake 14 mg	• Requirements should be met if sufficient energy and iron have been provided. • Major contributors to the menu are meats, fish, shellfish and poultry but also cereals, nuts, seeds and dairy/plant-based fortified dairy alternative foods.
Vitamin C[93]	Recommended daily intake 45 mg	• Ensure a variety of raw fruit and vegetables are available on the menu. Some examples that are particularly high in vitamin C include kiwifruit, citrus fruits, berries, capsicum, broccoli, tomatoes and snow peas. • Avoid overcooking/overheating or long/repeated heating of vitamin C–containing foods – this will result in large losses.
Folate[93]	Recommended daily intake 400 µg	• Include a minimum choice of three serves of fruit and five serves of vegetables and include dark green leafy vegetables on the menu. • Avoid overcooking/overheating or long/repeated heating of folate-containing foods – this will result in large losses.

Appendix 5: IDDSI framework

The International Dysphagia Diet Standardisation Initiative (IDDSI) is a global standardised framework that provides terminology and definitions for texture modified foods and thickened fluids.[114] It is a continuum of eight levels from zero to seven, as depicted in Figure 5. In Australia, the IDDSI framework replaces the *Australian standards for texture modified food and fluids*[114] (Australian Standards).

Figure 5: IDDSI framework

* These are NOT official IDDSI resources, educational materials or education programs and they are NOT meant to replace materials and resources on www.IDDSI.org

Adopting the IDDSI framework in Victorian health services is voluntary, in the same way adopting the terminology used in the Australian Standards was voluntary. In 2019 the IDDSI framework was formally adopted by Dietitians Australia, Speech Pathology Australia and the Institute of Hospitality in HealthCare. In lieu of government regulations, these professional associations provide leadership on professional practice.

The IDDSI framework has been developed with culturally neutral terminology, simple numbering and colour-coding that reduces challenges for people with red-green colour blindness. Coloured product labelling aligned to IDDSI has been implemented by companies including Nestlé Health Science, Trisco Foods (Precise brand) and Flavour Creations.

Compared with the Australian Standards, there is the addition of a new fluid thickness (1. Slightly thick) and objective testing of levels with simple tests that are quick, reliable and portable and don't rely on laboratory equipment or personal subjective measures. The mapping of the Australian Standards to IDDSI is depicted in Figure 6 and Figure 7. Further details and helpful resources specific to Australia can be obtained from the IDDSI website <https://iddsi.org/australia>.

Figure 6: Comparison of Australian Standards for texture modified food with the IDDSI framework

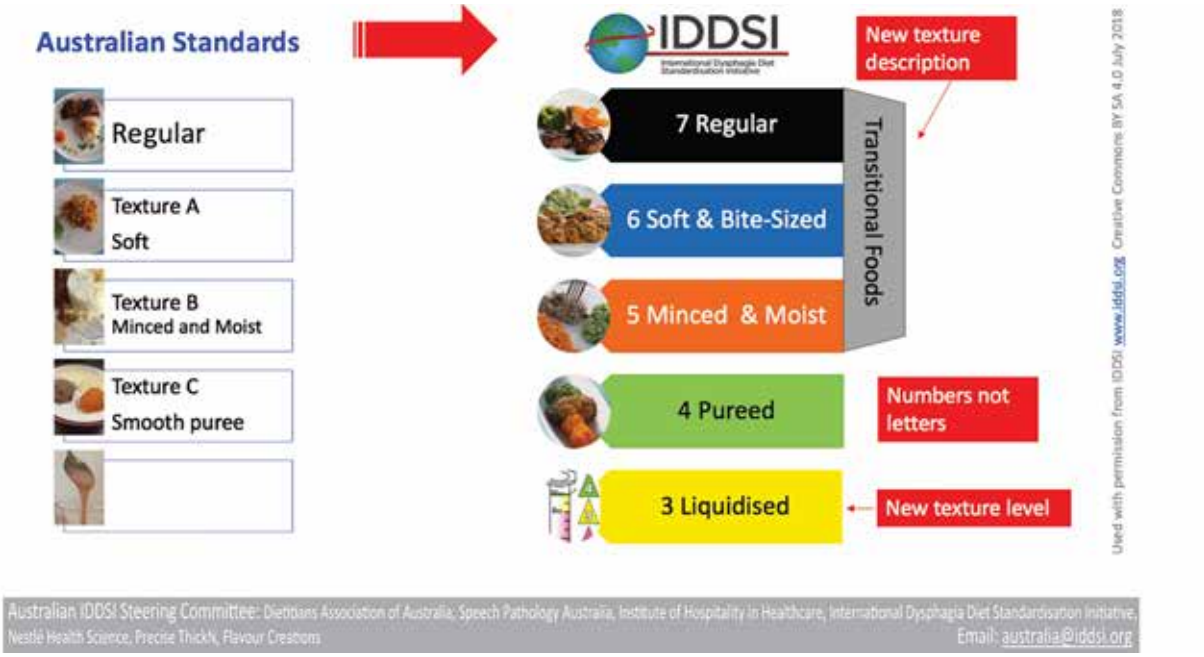
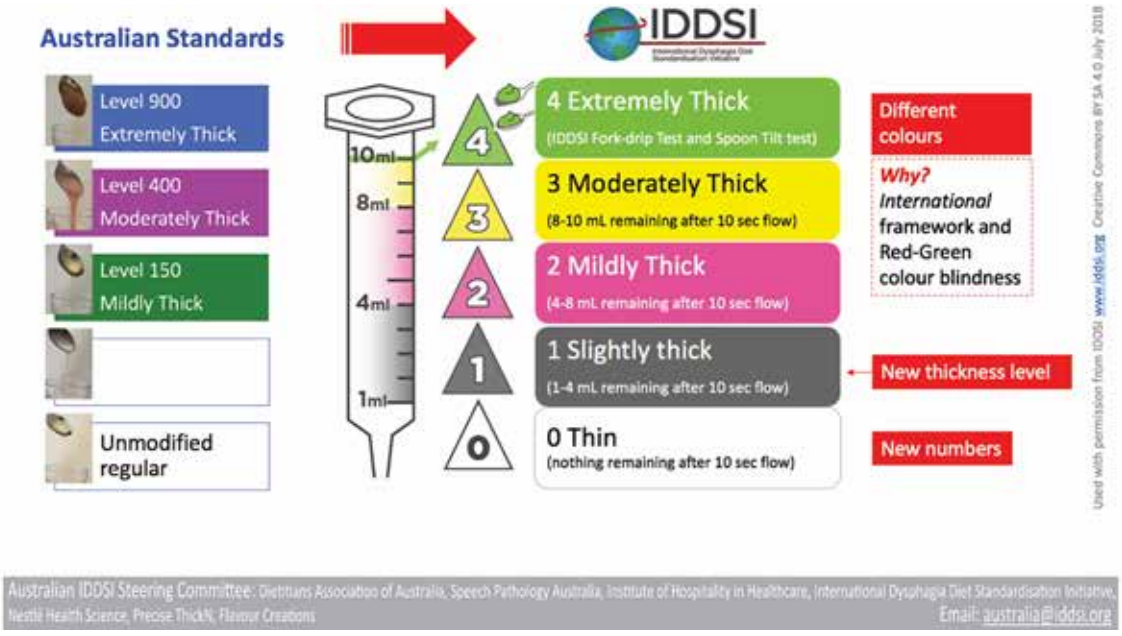


Figure 7: Comparison of Australian Standards for texture modified fluids with the IDDSI framework



Note: Product/company brand names used in this document do not imply endorsement by the Victorian Government.

Appendix 6: Strategies to enhance the meal environment

The following information provides a guide for enhancing the meal environment. This information is relevant for residents of PSRACS as well as long-stay or rehabilitation patients in hospitals.

Background

The meal environment and dining room atmosphere are incredibly important contributors to optimising mealtime enjoyment and potentially oral intake. However, research does not currently support strategies that suit all environments. This appendix provides a range of suggestions. Some of the strategies listed are based on evidence, others are expert opinion or recommended by a review completed by the Victorian Department of Health.[31] It is also important that patients and residents are consulted regularly because their needs may change over time. For further information on meal environment quality audit tools, refer to Appendix 7.

This list is by no means exhaustive and is intended to guide, encourage and inspire meal environment change.

Table 12: Strategies to enhance the meal environment

Component	Strategies
General ambience	• Provide background music that is soft and soothing – for example, classical or selected based on feedback.[129] Not everyone will enjoy music during mealtimes, so health services should look for patient/resident/family support of this initiative before implementing. • Create tantalising food smells in the dining room – for example, by cooking a casserole or curry in a slow cooker, serving coffee or freshly baked goods.[88,129] • Install an aquarium in the dining room.[166] • Provide soft, consistent lighting.[129] • Ensure the area is draught-free and set at a moderate temperature. • Use pale wall colours.[167] • Add indoor plants.
Furniture	• Provide a selection of tables and chairs that are comfortable and set at an appropriate height for patients/residents. • Arrange tables and chairs to allow ease of access, particularly for those with gait aids or in wheelchairs.
Table settings and dinnerware	• Consider table coverings. For example, traditional fabric table linen may be well received but not appropriate for all situations. • Consider adding a small fresh flower arrangement or pot plant on each table. • Provide home- or restaurant-like dinnerware including glassware, porcelain plates and non-plastic cutlery.[5,6,20,36,88,129,131] • Eliminate plastic trays.[20,131] • Make high-contrast plating and tableware available for those with dementia.[129,168] • Make built up plates and cutlery available for those with reduced ability to self-feed.
Avoiding distractions	• Avoid noise from televisions or those associated with shift changes. • Limit entering/exiting of visitors. • Limit medication rounds or visibility of drug carriages or files. • Avoid cleaning, allied health or doctor visits.[129,131]

Component	Strategies
Meal delivery	• Deliver meals in a dining room that simulates a restaurant or a family home. This may be by using bain-maries, having table service or buffets with servers.[5,6,20,21,36,88,129,131] – Regardless of the serving method used, minimum standard serve sizes still apply and processes should be in place to ensure consistency with this.
Seating	• Ensure appropriate and thoughtful seating arrangements that encourage social interaction.[20,131] • Develop intimate dining rooms that seat smaller numbers of patients/residents at a time.[20,129,131]
Social	• Consider family and friend engagement at mealtimes.[131] • Have staff sit with patients/residents at mealtimes to enhance social interaction.[20,131]
Menus	• Provide menus that include photographs of meal choices.[130] • Have a daily menu displayed in the dining room.
Other considerations	• Implement more flexible mealtimes. • Implement self-serve opportunities such as bread baskets, a fruit bowl or access to serve their own side dishes. • Implement programs where residents can participate in cooking.[31] • Develop vegetable or sensory gardens with programs where residents can participate in gardening.[169] • Develop and implement a trained volunteers mealtime assistance or assistance with eating program in collaboration with speech pathologists, nurses and dietitians.[170]

Useful Resources

The Victorian Health Building Authority PSRACS facility design guidelines outline the specific requirements for the planning and design of residential aged care facilities. These guidelines aim to assist service providers, designers, project managers and end-users to deliver environments that enable contemporary and innovative models of aged care. They are applicable for both new facilities and the refurbishment/extension of existing facilities.

<https://www.vhba.vic.gov.au/public-sector-residential-aged-care-services-interim-facility-design-guidelines>

The Department of Health Dementia friendly environments resource provides tools and advice for creating a dementia friendly eating environment as well as eating difficulties that can be addressed through changes in the environment.

<https://www.health.vic.gov.au/dementia-friendly-environments/dining-areas-kitchens-and-eating>

The Lantern Project <https://thelanternproject.com.au>

These are in Appendix 2 – Useful Links.

Appendix 7: Quality audit tools

This guide provides tools and resources to assist food service departments in health services to establish their own audit schedule based on best practice and recommended requirements of the Standards (section 3). The links are valid at the time of publication. The information is relevant to:

- food service managers
- chefs/cooks
- food service dietitians.

Table 13: General audit tools

Tool	Description
Dietitians Australia: Menu and Mealtime Quality Assessment for Residential Aged Care	For the exclusive use by Accredited Practising Dietitians to provide aged care homes with an assessment of their nutrition care, menu and mealtime experience using the Aged Care Quality Standards as the framework. Can only be accessed by Dietitians Australia members.
New Zealand Dietetic Association: Menu Audit Tool for Aged Care Facilities	Developed by the Dietetic Association to ensure compliance with the New Zealand Health and Disability Sector Standards. The audit tool is intended to assess the potential of a menu to meet the nutritional needs and standards for dietary variety for residents but cannot be used to guarantee the intakes of individual residents. <https://docplayer.net/50734726-New-zealand-dietetic-association-menu-audit-tool-for-aged-care-facilities.html>

Table 14: Best practice activities

Name of audit	Personnel responsible	Description of audit	Frequency per year	Tools and resources available
Menu review	• Food service dietitian • Food service management • Chefs/cooks • Speech Pathologist	Review of current menu against the Victorian Nutrition and Quality Food Standards	Hospitals: annually PSRACS: twice per year	Refer to section 3: 'Standards' for guidance on compliance requirements for all hospitals and PSRACS. Refer to section 5: 'Menu planning and review cycle' for guidance on how to undertake menu planning and review. Refer to Appendix 8 for the Menu planning and Standards checklist.
Tray-line and point of service	• Food service management • Chefs/cooks • Food service dieititian • Speech pathologist	Review of accuracy, TM food and fluid compliance, presentation, taste and temperature	All: quarterly (every 3 months)	Queensland Health: Meal Quality Audit Tool <https://www.health.qld.gov.au/__data/assets/pdf_file/0025/646054/fs_mqat.pdf> British Columbia: Audits and More Manual for Aged Care – Meal Service Audit (p. 154) <https://www.health.gov.bc.ca/library/publications/year/2008/Audits_and_More_Manual.pdf>

Name of audit	Personnel responsible	Description of audit	Frequency per year	Tools and resources available
Consumption and food waste	• Food service management • Chefs/cooks • Food service dieititian	Review of food waste at patient and resident level and/or kitchen level	All: twice per year	British Columbia: Audits and More Manual for Aged Care – Plate Waste Audit (p. 157) <https://www.health.gov.bc.ca/library/publications/year/2008/Audits_and_More_Manual.pdf> NSW Government: Love food hate waste – Business food waste review. <https://www.lovefoodhatewaste.nsw.gov.au/BusinessFoodWasteReview>
Meal environment	• Food service management • Chefs/cooks • Food service dieititian • Nurses	Review of the suitability of the dining environment for patients and residents	No minimum	Canadian Nutrition Society: Mealtime Audit Tool <https://nutritioncareincanada.ca/sites/default/uploads/files/MealtimeAudit.pdf> British Columbia Audits and More Manual for Aged Care: Dining Environment Audit (p. 106) <https://www.health.gov.bc.ca/library/publications/year/2008/Audits_and_More_Manual.pdf>

Table 15: Patient and resident feedback activities

Name of audit	Personnel responsible	Description of audit	Frequency per year	Tools and resources available
Point-of-service satisfaction	• Food service management • Chefs/cooks • Food service dieititian	Specific questions about satisfaction of meals (taste, presentation, temperature), timing, assistance and meal environment	All: quarterly (every 3 months)	NSW Government: Resident Meal Satisfaction Survey (Appendix 7, p. 187) <https://x2x8z3r3.stackpathcdn.com/wp-content/uploads/BestPracticeFoodandNutritionManualforAgedCare.pdf> Queensland Health: Acute Hospital Food Satisfaction Questionnaire <https://www.health.qld.gov.au/__data/assets/pdf_file/0037/655849/fs_achfpsq.pdf> Queensland Health: Resident Food Service Satisfaction Questionnaire: short version <https://www.health.qld.gov.au/__data/assets/pdf_file/0030/655851/fs_racf_satisfaction_short.pdf> Queensland Health: Resident Food Service Satisfaction Questionnaire: long version <https://www.health.qld.gov.au/__data/assets/pdf_file/0029/655850/fs_racf_satisfaction.pdf> Canadian Nutrition Society: Mealtime Audit Tool <https://nutritioncareincanada.ca/sites/default/uploads/files/MealtimeAudit.pdf>

Name of audit	Personnel responsible	Description of audit	Frequency per year	Tools and resources available
Patient and resident feedback sessions	• Food service management • Chefs/cooks • Food service dieititian	These feedback sessions should represent the health service population Feedback sessions can focus on menu planning or dish tasting for both existing and new dishes	All: quarterly (every 3 months)	Safer Care Victoria, Victorian Agency for Health Information: Partnering with consumers – a guide for health services <https://www.bettersafercare.vic.gov.au/support-and-training/partnering-with-consumers/health-services> Creative Victoria, Victorian Government: Run a focus group <https://creative.vic.gov.au/toolkit/articles/run-a-focus-group> NSW Agency for Clinical Innovation: Participant experience: focus groups facilitation guide <https://aci.health.nsw.gov.au/__data/assets/pdf_file/0006/333861/Participant-experience-focus-group-guide.pdf>
Community consultation	• Food service management • Chefs/cooks • Food service dieititian	Community consultation may be required when the population assessment identifies a need for increasing dishes of a particular culture, therefore engaging local culturally diverse community groups	All: responsive consultation as required	**Consultation with Aboriginal and Torres Strait Islander communities** Victorian Government, Department of Health: Aboriginal community engagement and partnership framework <https://www2.health.vic.gov.au/about/health-strategies/aboriginal-health/engagement> **Consultation with culturally diverse communities** Centre for Culture, Ethnicity and Health: Consumer participation strategies <https://www.ceh.org.au/wp-content/uploads/2017/05/consumer-participation-strategies.pdf> Australian Government, Department of Health: Actions to support older culturally and linguistically diverse people <https://www.health.gov.au/sites/default/files/documents/2019/12/actions-to-support-older-cald-people-a-guide-for-aged-care-providers.pdf> Centre for Cultural Diversity in Ageing: Inclusive Service Standards <http://www.culturaldiversity.com.au/service-providers/inclusive-service-standards>

Appendix 8: Menu planning and Standards checklist

The following checklist steps through the menu planning and review cycle as detailed in section 5 while applying the Standards from section 3 and the nutrient banding and minimum menu choices from section 4.

This checklist can be used to confirm what is currently in place and what additional items/actions may be required to meet the Standards. For menu/meal examples, please refer to section 4 and Appendix 10.

1. Stakeholder engagement			
Considerations	**Yes**	**No**	**Actions required / comments**
Food service dietitian and food service manager engaged to lead the menu planning/review process.	❑	❑	
Relevant internal and external stakeholders identified and involvement confirmed. Note: May be an existing nutrition steering committee.	❑	❑	
There is adequate representation from the following areas: • organisational / health service management • risk and quality • procurement/purchasing • nursing/medical • food service management • nutrition/dietetic • speech pathology • consumer groups.	❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑	❑ ❑ ❑ ❑ ❑ ❑ ❑ ❑	
Stakeholders have been advised of their roles and responsibilities.	❑	❑	
Regular meetings for the menu planning/review process have been scheduled and communicated.	❑	❑	

2. Data assessment and gap analysis			
Considerations	**Yes**	**No**	**Actions required / comments**
a. Health service population			
The health service population has been identified/evaluated, taking into consideration demographics, culture, religious representation, food beliefs, clinical landscape, average length of stay and physical needs.	❑	❑	
There is adequate information on the demographic, clinical, cultural, physical and psychosocial needs of the health service population to build the baseline diet.	❑	❑	
Therapeutic diets have been reviewed to ensure adequacy for the health service population.	❑	❑	
The health service can meet the cultural, religious, texture modified (TM) food and fluid and therapeutic menu options without engaging an external supplier.	❑	❑	
b. Food service system			
Kitchen facilities (e.g. storage, preparation areas and equipment) are adequate to meet the implemented meal preparation method – for example, cook-chill, cook-freeze, cook-fresh or hybrid.	❑	❑	
There is access to special equipment, or agreement with an appropriate supplier for TM food and fluid requirements.	❑	❑	
Meal ordering system meets the needs of the patients/residents and facilitates meal choices as close to the meal period as possible.	❑	❑	
Food service delivery frequency meets the requirement for a minimum of 3 main meals and 3 mid-meals/snacks.	❑	❑	
There is a documented policy and procedure for delivering food and fluids out of hours when required.	❑	❑	

2. Data assessment and gap analysis (continued)			
Considerations	**Yes**	**No**	**Actions required / comments**
c. Menu planning/review of staff involved in system			
The health service has appropriately trained/skilled staff to complete menu planning/review, including food service managers, food service dietitians, chefs/cooks, speech pathologists food service assistants, menu monitors, tray-line personnel and delivery staff (e.g. personal service or care assistants, allied health, nursing).	❑	❑	
Consumer representation input and involvement in the menu planning/ review process has been included.	❑	❑	
d. Risk and safety compliance			
The health service's food service complies with relevant risk and quality frameworks.	❑	❑	
Allergy management has been considered in the menu planning/ review.	❑	❑	
TM food and fluid provision has been included in the menu planning/review.	❑	❑	
The health service has a local policy documented for managing food brought in from outside.	❑	❑	
e. Feedback			
Feedback mechanisms and processes have been clearly identified and use of information gathered as input to menu planning/review has been documented.	❑	❑	
Results from previous audits and consumer feedback have been used as input into the menu planning/ review.	❑	❑	

3. Establishment of the menu planning/review working group			
Considerations	**Yes**	**No**	**Actions required / comments**
Members of the working group have been identified, with roles and responsibilities and meeting schedule communicated, and confirmed.	❑	❑	
There are adequate multidisciplinary team members including, but not limited to: • food service manager • chefs/cooks (in-house or from CPK) • food service dietitian • speech pathologist.	 ❑ ❑ ❑ ❑	 ❑ ❑ ❑ ❑	
4. Planning			
Considerations	**Yes**	**No**	**Actions required / comments**
a. Planning the menu			
Menu structure provides opportunity for minimum of 3 main meals and 3 snacks/mid-meals.	❑	❑	
Meal size variations (e.g. small, medium, large) are available.	❑	❑	
Existing recipes/products have been nutritionally analysed and mapped against Bands 1, 2, 3 and Unbanded categories.	❑	❑	
Breakfast: section 4.1 Daily: • Minimum 2 × Band 1 • Minimum 1 × hot cereal • Minimum 2 × Band 2 • Unlimited Unbanded varieties Weekly: • Minimum 6 × Band 1 varieties • Minimum 5 × Band 2 varieties • Maximum 2 × Band 3 options (with high-fat, high-sodium processed meats maximum of once per week)	 ❑ ❑ ❑ ❑ ❑ ❑ ❑	 ❑ ❑ ❑ ❑ ❑ ❑ ❑	

4. Planning (continued)			
Considerations	**Yes**	**No**	**Actions required / comments**
Soup: section 4.2 Daily: • Minimum 1 × Band 1 • Minimum 2 varieties Weekly: • Minimum 7 varieties • Maximum 2 × Unbanded	 ❑ ❑ ❑ ❑	 ❑ ❑ ❑ ❑	
Lunch and dinner main meals: section 4.3 Daily: • Minimum 2 × Band 1 Weekly: • Minimum 14 × Band 1 • Meals are not repeated • Maximum 2 × Unbanded (with high-fat, high-sodium processed meats maximum of once per week)	 ❑ ❑ ❑ ❑	 ❑ ❑ ❑ ❑	
Sides – starch: section 4.4 Daily: • Minimum 2 × Band 1 • Minimum 4 varieties Weekly: • Minimum 10 varieties	 ❑ ❑ ❑	 ❑ ❑ ❑	
Sides – vegetables: section 4.4 Daily: • Minimum 2 × Band 1 • Minimum 6 varieties Weekly: • Minimum 10 varieties	 ❑ ❑ ❑	 ❑ ❑ ❑	
Sandwiches and wraps: section 4.5 Daily: • Minimum 1 × Band 1 • Minimum 2 varieties Weekly: • Minimum 10 varieties	 ❑ ❑ ❑	 ❑ ❑ ❑	

4. Planning (continued)			
Considerations	**Yes**	**No**	**Actions required / comments**
Desserts: section 4.6 Daily: • Minimum 2 × Band 1 • Minimum 4 varieties Weekly: • Minimum 14 unique desserts	 ❑ ❑ ❑	 ❑ ❑ ❑	
Snacks: section 4.7 Daily: • Minimum 2 × Band 1 • Minimum 3 varieties Weekly: • Minimum 10 regular texture varieties • Minimum 6 TM varieties • Maximum 2 × Unbanded	 ❑ ❑ ❑ ❑ ❑	 ❑ ❑ ❑ ❑ ❑	
Fruit: section 4.8 Daily: • Minimum 3 varieties Weekly: • Minimum 5 varieties • Minimum 1 seasonal fruit on rotation • Maximum 7 × Band 2	 ❑ ❑ ❑ ❑	 ❑ ❑ ❑ ❑	
There is a minimum of 2 fish meals offered across the week (7 days) of which one is oily fish.	❑	❑	
There is a vegetarian choice at every eating occasion (via main menu or short order menu).	❑	❑	
Vegetarian main meals are Bands 1 or 2 only.	❑	❑	
Table/tray salt is a menu choice and not automatically provided.	❑	❑	
The naming of menu items are commonly accepted and understood names or adequately describe the contents or nature of the dish.	❑	❑	
Translated and, where required, pictorial menus are available for the health service population.	❑	❑	

4. Planning (continued)			
Considerations	**Yes**	**No**	**Actions required / comments**
A speech pathologist has approved all TM food and fluids.	❑	❑	
Cultural recipes/meals have been reviewed/taste-tested by consumer representatives from the specific culture.	❑	❑	
Seasonal menus have been considered, based on produce availability, patient/resident/family preferences and feedback.	❑	❑	
b. Recipe development and analysis **Note:** The gap analysis outcomes from 4a above will determine the number of additional recipes required to provide adequate options across the banding categories. The following is relevant for when introducing new recipes to the menu and when updating recipes.			
All meals have standardised recipes with serve size documented.	❑	❑	
All recipes are appropriate for the food service system and delivery method implemented by the health service (retain quality following re-therming).	❑	❑	
Recipe methods include presentation instructions, including TM-appropriate strategies where appropriate such as garnishes, crockery, piping/moulds for TM foods.	❑	❑	
Recipes minimise the use of additional salt and incorporate reduced-sodium ingredients where possible.	❑	❑	
Recipes minimise the use of saturated fats, replacing with unsaturated fats where appropriate.	❑	❑	
New or revised recipes have been taste-tested by patients/residents or a suitable representative before implementation.	❑	❑	
All recipes have been nutritionally analysed and endorsed by a food service dietitian.	❑	❑	

4. Planning (continued)			
Considerations	**Yes**	**No**	**Actions required / comments**
c. Product/item assessment and analysis			
All ready-to-eat/drink items have product information/specification sheets.	❑	❑	
All product information/ specification sheets have been reviewed and endorsed by a food service dietitian.	❑	❑	
d. Develop menu structure/grid			
Menu cycle length agreed by stakeholders or a steering committee and is a minimum of 7 days.	❑	❑	
For room service models the minimum number of Band 1 dishes/ items are available.	❑	❑	
Minimum menu choices have been met.	❑	❑	
Menu grids completed for all required textures.	❑	❑	
Menu grid analysis undertaken by food service dietitian.	❑	❑	
Menu grid meets baseline diet daily requirement of 8.5 MJ / 85 g protein minimum or: - 105 kJ/kg and 1.0 g/kg protein **(hospitals)** - 125 kJ/kg and 1.2 g/kg protein **(PSRACS)**, based on the average weight of the individual health service's specific population.	❑	❑	
Where nutrition provision differs from the baseline diet, the reasons have been documented based on an assessment of the health service population.	❑	❑	

5. Evaluation and quality			
Considerations	**Yes**	**No**	**Actions required / comments**
Full menu review (annual for **hospitals**, twice a year for **PSRACS**) completed.	❑	❑	
Quarterly tray-line and/or point-of-service quality auditing completed.	❑	❑	
Consumption and food waste audits completed twice a year.	❑	❑	
Quarterly point-of-service patient/resident/family satisfaction audits completed.	❑	❑	
Quarterly feedback sessions for patients/residents representing the health service's population have been completed.	❑	❑	
Patient/resident/family representation reflects the health service population.	❑	❑	
There is equitable access for feedback, with access to interpreters and/or relevant community group representation.	❑	❑	
Quality assurance activities have been documented, and outcomes and actions taken communicated back to relevant stakeholders (e.g. nutrition steering committee, consumer groups involved in feedback processes).	❑	❑	
There is a documented plan for alignment to the IDDSI framework.	❑	❑	
There is a documented process for managing patient/resident/family feedback and complaints, including documentation and communication of outcomes/actions.	❑	❑	
Changes incorporated into the menu based on patient/resident/family feedback have been communicated back to input participants.	❑	❑	

Appendix 9: Conducting a nutritional analysis of a recipe

The following information is presented as a general guide to analysing the nutritional content of a recipe using a computer software program incorporating food composition databases.

It is best practice to have an appropriately qualified dietitian with food service experience conduct nutrition analyses on recipes, in collaboration with chefs, food service managers and production managers.

All meals served at your health service should have standardised recipes to ensure consistency in taste, texture, presentation, serve size and nutritional content.

Steps for conducting a nutritional analysis of a recipe

Step 1: Select a nutrition analysis software and food composition database

- Select a nutrition analysis software with food composition databases that are appropriate for your health service.
- Use the same software and food composition databases across the health service's menu to ensure consistency of the nutrient analysis.
- FoodWorks contains the most comprehensive and up-to-date collection of Australian food composition databases and is used in almost every major hospital and university across Australia.[171] FoodWorks enables multiple food composition databases to be selected, providing extensive produce and branded foods for building and/or analysing recipes – for example, AusNUT, AusBrands and AusFoods. Refer to Appendix 2 for links to more information about FoodWorks.

Step 2: Document the ingredients of the recipe

- There are many fresh and processed products available in food composition databases from which the ingredients for a specific recipe can be selected, with some already accounting for preparation methods.
- It is important that you understand the details of the ingredients in your recipe in order to ascertain the outcome of each and the impact this has on your analysis. For example, where possible, weigh ingredients in their prepared form (skin, bone waste, stones, fluid removed).
- The accurate analysis of macro and micronutrients in a recipe can be improved by ensuring sufficient detail in the individual ingredients – for example, cut and/or trim of meats, size of eggs, products in brine or springwater, drained or not, specific brands, salt-reduced, sugar-free.
- If the brand of a pre-produced ingredient is not available in the food composition database, then create a new item and use the Nutrition Information Panel (NIP) or the manufacturer's website to collect the specific nutrients. Once created, this ingredient can then be entered into your recipe along with the other ingredients.
- Where in-house products are used as an ingredient in another recipe (e.g. white sauce in penne pasta carbonara), a recipe analysis should be conducted for that in-house product/ingredient separately. It can then be entered as an ingredient in the analysis of other recipes.
- Enter each of the ingredients from the recipe and specify the weights and measurements.

Step 3: Enter the recipe

- For each menu item, create a recipe using the selected software and food composition database(s).
- Enter each recipe ingredient into the software program, ensuring accurate weights and measurements are included.
- Enter the ingredients in their raw form unless they are pre-packaged/processed ingredients – for example, fat-trimmed raw beef, raw broccoli, canned kidney beans (drained), canned tomatoes (no added salt).
- Fresh and dried herbs/spices are typically not entered unless they contribute a significant nutrient. For example, seasonings such as Mexican or Moroccan spices and some curry powders can be high in sodium so should be entered.

Step 4: Calculate the yield and number of serves

- The recipe yield is the total amount of food the recipe produces (the weight of the final product). This needs to be accurate to enable the number and size of each serve to be calculated.
- Weighing the cooked recipe during the testing phase of recipe development is the most accurate method of determining the yield.
- To determine the size/weight of each serve, divide the yield (cooked weight) by the number of serves the recipe specifies.
- Where the calculated serve size differs from that stipulated in the recipe, there may be inaccurate ingredient weights, or the recipe does not accurately reflect production methods and anticipated cooking losses.
- Recipe analysis software allows the user to adjust ingredient weights and preparation methods, as well as the overall yield percentage and either the weight or number of serves. This enables the true outcome of the tested recipe to be entered to guide required adjustments to the standardised recipe, and also for nutrient analysis.

Consider both ingredient weight changes and nutrient retention impacts resulting from the preparation and cooking methods. For some recipes it may be more accurate to enter cooked ingredients (e.g. boiled pasta, steamed broccoli, deep-fried chicken) to account for these impacts on both weight and nutrient retention.

The weight of an ingredient can increase during the cooking process due to the absorption of water or cooking oils/fat, or decrease due to moisture evaporation or fat rendering.[172]

Nutrient retention for ingredients varies greatly, depending on both the nutrient of concern and also the specific method of preparation and cooking.[173,174] It is always best to calculate the weight change of your specific recipe or ingredient where possible by calculating raw and cooked weights of a recipe or ingredient.

Consider these variable factors when conducting a recipe analysis. Appendix 2 provides links to commonly used weight change and nutrient retention factor tables for many foods.

Appendix 10: Seven-day grid for regular texture and puree (IDDSI level 4) menus

The following tables detail example seven-day menu grids for both regular texture and puree (IDDSI level 4) texture menu choices. The menu grids meet the requirements for the Standards (section 3) and nutrient banding and minimum menu choice (section 4). For a detailed three-day menu selection nutrition analysis for regular and puree textures, refer to Appendix 11.

1. Regular texture seven-day menu grid

Band 1	Band 2	Unbanded

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast							
Hot protein	Scrambled eggs	Cheesy baked beans	Baked eggs with vegetables & cheese	Pancakes with maple syrup & fresh fruit	Cheese croissant	Poached eggs with hollandaise sauce	Savoury rice porridge with chicken/egg
Hot cereal	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk
Cold protein 1	Banana smoothie (180 mL)	Mango smoothie (200 mL)	Berry smoothie (180 mL)	Muesli with Greek yoghurt (3.5% fat)	Muesli with high-protein yoghurt	Avocado & 30 g feta	Iced coffee – 250 mL full cream milk topped with whipped cream
Cold protein 2	Yoghurt	Yoghurt	Yoghurt	Yoghurt	Yoghurt	Yoghurt	Yoghurt
Cold cereals	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk	Wheat biscuits Muesli Corn flakes Puffed rice Bran flakes Full cream milk Low fat milk Soy milk

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Bread/toast	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey	Wholemeal Multigrain White English muffin Margarine Butter Jam Peanut butter Vegemite Honey
Fruit	Peach cup	Pear	Apple or orange juice	Banana	Orange	Nectarine	Apple or orange juice
Snack							
Fruit	Apple	Strawberries	Orange	Mango	Pear	Dried apricots	Apple
Snack	Strawberry yoghurt	Cheese & crackers	Choc chip mini muffin	Low fat blueberry yoghurt	Muesli bar	Mixed unsalted nuts	Frozen yoghurt
Lunch							
Soup 1			Beef, barley & vegetable	Spicy black bean	Roast pumpkin & chickpea	Spicy chicken, lentil & cauliflower	
Soup 2		Creamy mushroom	Creamy tomato	Tomato & red lentil			Spicy lentil & quinoa
Main 1	Lamb curry	Beef Stroganoff	Salmon pasta mornay	Roast pork with apple sauce	Beef potato-topped pie	Chicken Caesar salad with dressing	Fish curry
Main 2	Cheese & asparagus quiche	Grilled fish with tartare sauce & lemon	Beef rissoles with gravy	Spicy chicken & coconut curry	Tofu & legume stir-fry	Cheese & spinach filo pie	Beef lasagne
Starch 1	Spiced rice	Boiled rice	Mashed potato	Roast potato	Fried rice	Olive speciality bread	Boiled rice
Starch 2	Scallop/gratin potato	Jacket potato	Green lentil salad	Boiled rice	Corn cob	Jacket potato with cheese	Herbed oven baked potato

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Vegetable 1	Salad with honey dressing	Salad with Caesar dressing	Garden salad	Coleslaw	Green beans	Chargrilled vegetable mix	Carrots
Vegetable 2	Carrots	Broccoli	Garlic mushrooms	Honey carrots	Capsicum (all colours)	Peas	Green beans
Vegetable 3	Peas	Roast pumpkin	Silverbeet	Broccoli	Cabbage	Garden salad	Spinach
Sandwich or wrap	Chicken & salad	Spicy tofu & salad	Cheese, refried beans & avocado with salad	Falafel with hummus & lettuce	Roast beef with salad – with or without mustard	Tuna, mayo & salad	Chicken, avocado & salad
Dessert 1	Cheesecake	Banana cake with cream	Crème caramel	Vanilla thickshake (200 mL)	Fruit & cheese platter with crackers	Lemon tart with cream	Chocolate mousse with strawberries
Dessert 2	Pear crumble with ice cream	Caramel milkshake (100–150 mL)	Apple strudel with yoghurt	Chocolate & orange cake	Berry pavlova with cream	Banana milkshake (100–150 mL)	Jelly & ice cream
Snack							
Fruit	Mango	Dried apricots	Pear	Fruit salad cup	Mixed berries	Apple or orange juice	Banana
Snack	Scone with jam & cream	Mini quiche	Caramel slice	Hummus, crackers & vegetable sticks	Chocolate milkshake	Cheese scone	Greek yoghurt
Dinner							
Soup 1	Spicy chicken, lentil & cauliflower	Tofu & egg					Beef, barley & vegetable
Soup 2	Tomato & basil				Potato & Leek	Tomato & red lentil	
Main meal 1	Beef & mushroom casserole	Roast chicken with gravy	Roast lamb with mint sauce	Salmon & teriyaki	Chicken with honey & apricots	Beef & red wine casserole	Chicken & cashew nut stir-fry
Main meal 2	Vegetarian chilli con carne (TVP & beans) with yoghurt	Lamb potato-topped pie	Curried lentil patties	Spaghetti bolognaise	Grilled fish with tartare & lemon	Vegetarian cheesy lasagne (made with TVP)	Baked eggs with cheese & legumes

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Starch 1	Boiled sweet potato	Roast potato	Wedges	Soba noodles	Sweet potato oven baked chips	Mashed potato	Rice noodles
Starch 2	Boiled rice	Buttered corn	Rice salad	Boiled potato	Jacket potato with yoghurt	Boiled rice	Roast sweet potato
Vegetable 1	Broccoli	Coleslaw	Roast pumpkin	Cauliflower	Garden salad with vinaigrette dressing	Pumpkin	Peas
Vegetable 2	Zucchini	Cauliflower in cheese sauce	Green beans	Zucchini in cheese sauce	Carrot & parsnip mash	Broccoli with cheese sauce	Cauliflower
Vegetable 3	Green beans	Peas	Side garden salad	Soybeans (shelled edamame)	Silverbeet	Spinach	Salad with honey dressing
Sandwich or wrap	Tuna, mayo and salad	Ham, cheese & tomato	Egg & lettuce	Chicken, cheese & avocado	Cheese & salad	Turkey & salad	Corned beef & salad with or without mustard
Dessert 1	Fortified baked custard	Chocolate mousse	Trifle	Apple & berry crumble	Fortified baked custard	Crème caramel with cream	Banana cake with cream
Dessert 2	Apple & berry strudel with cream	Pear crumble	Fruit salad & ice cream	Passionfruit cheesecake	Chocolate cake with cream	Fresh fruit salad with cream	Strawberry milkshake (100–150 mL)
Snack available 24/7 (PSRACS) or supper (hospital)							
Fruit	Orange	Two fruits fruit pack	Strawberries	Apple	Banana	Peach fruit pack	Prunes
Snack	Cheese & crackers	Vanilla yoghurt	Frozen yoghurt	Half an egg & lettuce sandwich	Sliced apple with nut butter	Anzac biscuit	Half a ham, cheese & tomato sandwich

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Daily extras							
May be offered on the menu at each meal and mid-meal as appropriate	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Pepper Salt Tomato sauce Margarine Butter

2. Puree (IDDSI level 4) texture seven-day menu grid

Band 1	Band 2	Unbanded

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Breakfast							
Hot protein	Pureed scrambled eggs	Pureed & strained baked beans with cheese sauce	Pureed cheese omelette	Pureed sausage, onion & tomato sauce	Pureed & strained baked beans with fortified cheese sauce	Pureed cheesy/ chilli scrambled eggs	Pureed poached eggs
Hot cereal	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk	Porridge made with fortified milk
Cold protein 1	Banana smoothie (180 mL) – no fruit pieces	Mango smoothie (200 mL) – no fruit pieces	Berry smoothie (180 mL) – strained	Fortified banana smoothie (yoghurt, honey, skim milk powder)	High protein yoghurt with pureed apple & cinnamon	Pureed mango/ peach/ apple with yoghurt	Iced coffee smoothie – 250 mL full cream milk, 100 mL ice cream
Cold protein 2	Smooth yoghurt	Smooth yoghurt	Smooth yoghurt	Smooth yoghurt	Mango smoothie (200 mL) – no fruit pieces	Banana smoothie (200 mL) – no fruit pieces	Smooth yoghurt
Fruit	Pureed peaches	Pureed pear	Apple or orange juice	Pureed apple	Pureed apple & strawberry	Pureed stone fruit	Apple or orange juice
Snack							
Fruit	Pureed apple	Pureed apple & strawberry	Pureed mango	Pureed banana	Pureed poached pear	Pureed apple & strawberry	Pureed apple
Snack	Strawberry yoghurt – no fruit pieces	Pureed lemon cheesecake – no base	Chocolate mousse	Blueberry yoghurt – no fruit pieces	Smooth vanilla yoghurt	Custard	Frozen yoghurt

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Lunch							
Soup 1					Pureed Moroccan lamb	Pureed spicy chicken, lentil & cauliflower	Pureed chicken & vegetable
Soup 2		Creamy smooth mushroom		Pureed tomato & red lentil	Pureed potato & leek		
Main meal 1	Pureed lamb curry	Pureed beef Stroganoff	Pureed salmon pasta mornay	Pureed roast pork with apple sauce	Pureed beef potato-topped pie	Pureed chicken casserole	Pureed fish curry
Main meal 2	Pureed cheese & asparagus frittata	Pureed fish with tartare sauce & lemon	Pureed beef rissoles with gravy	Pureed spicy chicken & coconut curry	Pureed refried beans with avocado & sour cream	Pureed tofu & pumpkin curry	Pureed beef lasagne
Starch 1	Pureed spiced rice*	Pureed spinach pasta	Pureed fortified potato#	Pureed macaroni cheese	Pureed rice*	Pureed fortified potato#	Pureed rice*
Starch 2	Pureed fortified potato#	Pureed fortified potato#	Pureed sweet potato	Pureed fortified potato#	Pureed sweet potato with paprika	Pureed rice*	Pureed sweet potato
Vegetable 1	Pureed cheesy cauliflower	Pureed cheesy broccoli	Pureed fortified broccoli	Pureed honey carrots	Pureed cheesy broccoli	Pureed carrot & parsnip	Pureed creamed spinach
Vegetable 2	Pureed carrots	Pureed spiced pumpkin	Pureed carrots	Pureed silverbeet with garlic	Pureed spiced pumpkin	Pureed strained eggplant & tomato	Pureed cauliflower
Vegetable 3	Pureed fortified broccoli	Pureed cabbage	Pureed strained eggplant & tomato	Pureed cauliflower	Pureed beetroot & apple	Pureed cabbage	Pureed carrots
Dessert 1	Pureed cheesecake – no base	Smooth banana mouse with cream	Crème caramel	Vanilla thick shake (150 mL)	Pureed apricots with custard	Lemon cream yoghurt	Chocolate mousse with strawberry sauce
Dessert 2	Chocolate thickshake (150 mL)	Caramel milkshake (100–150 mL)	Pureed apple crumble	Pureed chocolate & pear self-saucing pudding	Smooth chocolate & orange mousse cake	Banana milkshake (100–150 mL)	Lemon ricotta whip

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Snack							
Fruit	Pureed mango	Pureed peaches	Pureed pear	Pureed two fruits	Pureed peaches	Pureed apricots	Pureed banana
Snack	Pureed ricotta cheese with honey	Smooth yoghurt	Herbed or spiced whipped ricotta	Mango yoghurt – no fruit pieces	Blueberry yoghurt – no fruit pieces	Custard	Frozen yoghurt
Dinner							
Soup 1	Pureed tomato & basil	Pureed tofu & egg	Pureed spicy lamb	Pureed & strained minestrone			Pureed beef, barley & vegetable
Soup 2	Pureed spicy chicken, lentil & cauliflower		Pureed chicken & vegetable			Pureed tomato & red lentil	
Main meal 1	Pureed beef casserole	Pureed roast chicken with gravy	Pureed roast lamb with mint sauce	Pureed salmon & teriyaki with extra sauce	Pureed chicken & red capsicum sauce	Pureed beef & red wine casserole	Pureed basil pesto chicken
Main meal 2	Pureed & strained vegetarian chilli con carne (soft tofu)	Pureed lamb potato-topped pie	Pureed lentil & potato curry	Pureed spaghetti bolognaise	Pureed fish with tartare	Pureed & strained cheesy refried bean lasagne	Pureed eggs with cheese & vegetables
Starch 1	Pureed rice*	Pureed fortified potato#	Pureed fortified potato#	Pureed fortified potato#	Pureed fortified potato#	Pureed rice*	Pureed fortified potato#
Starch 2	Pureed sweet potato	Pureed ginger & coriander sweet potato	Pureed spiced rice*	Pureed rice*	Pureed pesto pasta	Pureed sweet potato	Pureed tomato pasta
Vegetable 1	Pureed creamed spinach	Pureed honey carrots	Pureed creamy cauliflower	Pureed carrot & parsnip	Pureed creamed spinach	Pureed cheesy cauliflower	Pureed cheesy broccoli
Vegetable 2	Pureed carrot & parsnip	Pureed spinach	Pureed beetroot & apple	Pureed cabbage	Pureed carrot	Pureed spinach	Pureed silverbeet with garlic
Vegetable 3	Pureed & strained eggplant & tomato	Pureed cauliflower	Pureed pumpkin	Pureed fortified broccoli	Pureed cauliflower	Pureed pumpkin	Pureed beetroot & apple

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Dessert 1	Fortified baked custard – skinless	Chocolate mousse	Pureed trifle	Fortified custard	Pureed ginger pudding & custard	Crème caramel with cream	Passionfruit mousse – no seeds
Dessert 2	Strained fortified berry mousse with apple puree	Strawberry thick shake (150 mL)	Fortified custard	Passionfruit cheesecake – no base	Chocolate thickshake (150 mL)	Tropical fruit yoghurt – no fruit pieces	Strawberry milkshake (100–150 mL)
Snack available 24/7 (PSRACS) or supper (hospital)							
Fruit	Pureed pear	Pureed two fruits	Pureed apple & strawberry	Pureed apple	Pureed banana	Pureed peach	Pureed two fruits
Snack	Strawberry yoghurt – no pieces	Smooth vanilla yoghurt	Frozen yoghurt	Pureed banana with cinnamon & cream	Whipped ricotta with honey	Pureed banana with caramel mousse	Fortified custard
Daily extras							
May be offered on the menu at each meal and mid-meal as appropriate	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter	Tea Coffee Milk Milk alternative Sugar Sweetener Finely ground pepper Salt Tomato sauce Margarine Butter

* Rice can be pureed with vegetable or meat-based stocks, milk (or milk alternative) or skim milk powder with water. Short grain rice is a better choice to reduce stickiness. Depending on equipment used, straining may also be required once pureed. Brown rice is not suitable for pureeing because it remains grainy.

To increase variety, use different herbs and spices to change the flavour of the fortified potato.

Appendix 11: Three-day menu selection nutrition analysis for regular and puree (IDDSI level 4) textures

Approach

Three days were selected from the seven-day menu grid (Appendix 10) and recipes sourced and/or developed for both the regular texture and puree (IDDSI level 4) menu choices. Recipes were entered into FoodWorks 9 using raw ingredients for multi-ingredient recipes. The same recipes were entered using cooked ingredients for comparison, with the nutrition profile variations negligible, which highlights a limitation of food composition databases. Given this outcome, recipes using raw ingredients were used in the final reported analysis below except where the menu item is a single product – for example, steamed rice, baked potato, steamed vegetables.

For the puree (IDDSI level 4) menu, all recipes for the three days were reviewed by a chef and, where regular texture recipes were deemed suitable for pureeing without additives, the regular texture recipe was used for nutrition analysis. A daily selection was then undertaken for the three days, replicating the patient/consumer experience of self-selection. These selections are detailed below, with nutrition analysis based on selection, not a predetermined consumption level.

Nutrition Reference Values

Daily energy and protein requirements of 8.5 MJ and 85 g protein are based on Standard 3.2. These requirements apply to both regular texture and texture modified menus. Using the estimated average requirement (EAR) and recommended daily intake (RDI) for selected micronutrients, goals have been set at the highest recommendation across men and women aged over 51 years, ensuring those with the highest needs are accounted for.[93] Comparisons were made for all the micronutrients available in FoodWorks 9 (a subset of which is depicted below), using adequate intake (AI) goals where no EARs were available. For the regular texture menu, all goals were met except for zinc at 91 per cent on the regular texture menu. This is considered acceptable in a 3-day analysis, with the expectation that requirements are met across 7 days. For the puree menu, the saturated fat total was 12 per cent, exceeding the goal of under 10 per cent due to the predominant use of dairy-based foods for fortification. In addition, the test puree menu does not meet the recommended minimum serve of grains per day. This is acceptable because the fibre total exceeded the goal of 30 g.

The nutrient analysis does not account for factors affecting the retention/loss of micronutrients in food such as storage type and length, washing, peeling, cutting and cooking methods. The degree of impact, and the micronutrients involved, is highly variable depending on the type of food and the preparation/cooking methods used, and this should be considered when developing menus, meals and standardised recipes.

Food group serves

The five food groups, as recommended by the Australian Department of Health, are vegetables, fruit, grains/cereal, animal/plant protein foods and dairy/dairy alternatives.[103] Eating a variety of foods from each of these groups daily contributes to meeting the nutrient requirements essential for good health.[103] For the purpose of this nutrition analysis, the number of serves for each of the five food groups is based on both men and women aged over 51 years, using a range to cover the lower and upper recommendations.[103]

Regular texture menu selection

Three-day regular texture menu selection

Day 1	Day 2	Day 3
Breakfast Breakfast – Cheesy baked beans Bread – Wholemeal Beverage – Coffee Beverage – Skim milk UHT PC Sweetener – Equal or Natvia sachet Fruit – Pear	**Breakfast** Breakfast – Porridge made with fortified milk Breakfast – Vanilla yoghurt Bread – Wholemeal Spread – Margarine Spread – Vegemite Beverage – Coffee Beverage – Skim milk, UHT PC Sweetener – Equal or Natvia sachet	**Breakfast** Breakfast – Muesli with Greek yoghurt (reduced fat) Fruit – Banana Beverage – Coffee Beverage – Skim milk UHT PC Sweetener – Equal or Natvia sachet Bread – Wholemeal Spread – Peanut butter
Morning tea Snack – Cheese and crackers	**Morning tea** Fruit – Orange	**Morning tea** Fruit – Mango
Lunch Soup – Creamy mushroom Main – Grilled fish with lemon Main – Tartare sauce Side – Boiled/steamed white rice Side – Broccoli Dessert – Caramel milkshake – 120 mL	**Lunch** Soup – Beef, barley and vegetable Main – Beef rissoles Main – Beef gravy Side – Garlic mushrooms Side – Silverbeet Dessert – Crème caramel	**Lunch** Soup – Spicy black bean Main – Roast pork with apple sauce Side – Roast pumpkin Side – Broccoli Dessert – Vanilla shake 200 mL
Afternoon tea Snack – Mini quiche Beverage – Coffee Beverage – Skim milk UHT PC Sweetener – Equal or Natvia sachet	**Afternoon tea** Fruit – Pear	**Afternoon tea** Fruit – Fruit salad cup Beverage – Coffee Beverage – Skim milk UHT PC Sweetener – Equal or Natvia sachet
Dinner Main – Roast chicken with gravy Side – Roast potato Side – Cauliflower with cheese sauce Side – Peas Dessert – Chocolate mousse	**Dinner** Main – Curried lentil patties Side – Rice salad Side – Roast pumpkin Side – Honey carrots Dessert – Trifle	**Dinner** Main – Salmon teriyaki Side – Soba noodles Side – Soybeans Side – Cauliflower Dessert – Apple and berry crumble
Supper Snack – Vanilla yoghurt	**Supper** Snack – Frozen yoghurt	**Supper** Half a sandwich – Egg, lettuce and mayo on wholemeal bread

Note: Product brand names used in this document do not imply endorsement by the Victorian Government.

Regular texture menu selection – nutrient analysis

Table 16: Regular texture menu selection – macronutrient analysis

Nutrient	Daily goal	Test menu 1	% of goal
Energy (kJ)	8,500	10,019	118%
Protein (g)	85	131	154%
Saturated fat (% energy)	< 10%	9	94%
Sodium (mg)	< 2,000	1,744	87%
Fibre (g)	30	51	169%

Table 17: Regular texture menu selection – food group analysis

Food group	Daily goal	Test menu 1	% of goal
Vegetables	5–5.5 serves	9.4	171–190%
Fruit	2 serves	2	102%
Grains	3–6 serves	5.4	90–180%
Meat and alternatives	2–2.5 serves	4.1	164–205%
Milk and alternatives	2.5–4 serves	2.7	68–108%

Table 18: Regular texture menu selection – micronutrient analysis

Nutrient	EAR	RDI	Test menu	% EAR	% RDI
Calcium (mg)	1,100.0	1,300.0	1,301.1	118%	100%
Folate (µg)	320.0	400.0	481.5	150%	120%
Iron (mg)	6.0	8.0	15.6	260%	195%
Magnesium (mg)	350.0	420.0	550.7	157%	131%
Vitamin B12 (µg)	2.0	2.4	5.9	295%	246%
Zinc	12.0	14.0	12.8	107%	91%

Puree (IDDSI level 4) texture menu selection

Three-day puree (IDDSI level 4) texture menu selection

Day 1	Day 2	Day 3
Breakfast Breakfast – Porridge made with fortified milk Breakfast – Vanilla yoghurt Puree – Fruit – Pear Beverage – Tea Beverage – Skim milk UHT PC Sugar sachet	**Breakfast** Breakfast – Porridge made with fortified milk Breakfast – Berry smoothie Beverage – Tea Beverage – Skim milk UHT PC Sugar sachet	**Breakfast** Puree – Breakfast – Sausage, onion and tomato sauce Breakfast – Vanilla yoghurt Puree – Fruit – Apple Beverage – Tea Beverage – Skim milk UHT PC Sugar sachet
Morning tea Puree – Fruit – Apple and strawberry	**Morning tea** Puree – Fruit – Mango	**Morning tea** Puree - Fruit – Banana
Lunch Soup – Creamy mushroom Puree – Main – Fish with lemon Puree – Main – Tartare sauce Puree – Side – Fortified potato Puree – Side – Spiced pumpkin Puree – Side – Cabbage Dessert – Caramel milkshake 120 mL	**Lunch** Main – Salmon and pasta mornay Puree – Side – Fortified broccoli Puree – Side – Eggplant and tomato Puree – Dessert – Apple crumble	**Lunch** Soup – Tomato and red lentil Puree – Main – Roast pork with apple sauce Puree – Side – Fortified potato Puree – Side – Honey carrots Puree – Side – Silverbeet with garlic Puree – Side – Cauliflower Dessert – Vanilla shake – 200 mL
Afternoon tea Puree – Fruit – Peaches	**Afternoon tea** Puree – Snack – Whipped herbed ricotta	**Afternoon tea** Puree – Snack – Mango yoghurt (no fruit pieces)
Dinner Puree – Main – Lamb potato-topped pie Puree – Side – Ginger and coriander sweet potato Puree – Side – Spinach Puree – Side – Cauliflower Dessert – Chocolate mousse	**Dinner** Soup – Spicy lamb Puree – Main – Potato and lentil curry Puree – Side – Spiced rice Puree – Side – Creamy cauliflower Puree – Side – Beetroot and apple Puree – Dessert – Trifle	**Dinner** Puree – Soup – Strained minestrone Puree – Main – Spaghetti bolognaise Puree – Dessert – Fortified custard
Supper Snack – Vanilla yoghurt	**Supper** Snack – Frozen yoghurt	**Supper** Puree – Fruit – Apple

Puree (IDDSI level 4) texture menu selection – nutrient analysis

Table 19: Puree (IDDSI level 4) texture menu selection – macronutrient analysis

Nutrient	Daily goal	Test menu 1	% of goal
Energy (kJ)	8,500	9,211	108%
Protein (g)	85	117	137%
Saturated fat (% energy)	< 10%	12	124%
Sodium (mg)	< 2,000	1,734	87%
Fibre (g)	30	39	130%

Table 20: Puree (IDDSI level 4) texture menu selection – food serve analysis

Food group	Daily goal	Test menu 1	% of goal
Vegetables	5–5.5 serves	9.0	166–180%
Fruit	2 serves	3	150%
Grains	3–6 serves	2.7	45–90%
Meat and alternatives	2–2.5 serves	3.0	120–150%
Milk and alternatives	2.5–4 serves	4.2	105–168%

Table 21: Puree (IDDSI level 4) texture menu selection – micronutrient analysis

Nutrient	EAR	RDI	Test menu	% EAR	% RDI
Calcium (mg)	1,100.0	1,300.0	1,746.1	159%	134%
Folate (µg)	320.0	400.0	547.5	171%	137%
Iron (mg)	6.0	8.0	14.8	247%	185%
Magnesium (mg)	350.0	420.0	425.8	122%	101%
Vitamin B12 (µg)	2.0	2.4	7.1	355%	296%
Zinc	12.0	14.0	14.0	117%	100%

Glossary

Term	Definition
2009 Standards	*Nutrition standards for menu items in Victorian hospitals and residential aged care facilities* (2009)
à la carte menus	Contain individually prepared dishes that don't form part of the standard daily set menu. For some health services this is how the short order menu list is used.
Aged Care Quality Standards (ACQS)	Standards relating to quality and safety that the Aged Care Quality and Safety Commission (Australian Government) expects organisations providing aged care services in Australia to comply with.
Australian Dietary Guidelines (ADG)	Provides guidance on foods, food groups and dietary patterns that protect against chronic disease and offer nutrients required for optimal health and wellbeing.
Australian Guide to Healthy Eating (AGHE)	Food selection guide, visually representing the proportion of the five food groups recommended for consumption each day.
adequate intake (AI)	A value based on observed or experimentally determined approximations of nutrient intake by a group (or groups) of healthy people.
Australasian Society of Clinical Immunology and Allergy (ASCIA)	The peak clinical body of allergists and immunologists in Australia and New Zealand.
baseline diet	Food and fluids prescribed for most patients and residents on admission and throughout their length of stay. Commonly referred to as a 'full ward diet' or 'regular diet'.
banding	For the purpose of this document, banding or 'the bands' refers to the method of classifying menu items with respect to nutritional content and density. The bands define nutrition profiles within each of the menu categories outlined in section 4: 'Nutrient banding and minimum menu choice tables'.
central production kitchen (CPK)	A kitchen space used to produce meals before they are sent to different locations for plating and serving to customers.
children	Throughout this document, the term 'children' is used to describe the age spectrum that is infancy through to adolescence.
continuous quality improvement (CQI)	Systematic process of progressive incremental improvements to the quality of care and services. It is a continual and ongoing effort to achieve measurable outputs and outcomes in response to the needs of service users.
default menu	Facility-selected menu (not chosen by patients/residents).
dietitian	A person specifically trained in the nutritional needs and clinical nutritional care of people, and who is credentialed as an Accredited Practising Dietitian (APD) with Dietitians Australia.
dinnerware	Refers to the plates, cups, bowls, glasses, cutlery and other tableware used to serve a meal.

Term	Definition
discretionary food and drinks	As defined in the ADGs, these food and drinks tend to be high in saturated fat and/or added sugars, salt and alcohol and low in fibre. Examples include biscuits, cakes, pastries, pies, processed meats, commercial pizza/ burgers and fried foods, crisps, chocolate, confectionery, sugary drinks and alcohol. They are deemed not essential for a healthy diet.
dysphagia	A medical term that refers to difficulty swallowing. Signs and symptoms can include difficulty initiating a swallow, coughing, choking, a wet voice, excessive saliva production and repeated episodes of pneumonia. People living with dysphagia may require texture modified food or thickened fluids to mitigate the risk of aspiration.
estimated average requirement (EAR)	Daily nutrient level estimated to meet the requirements of half the healthy individuals in a particular life stage and gender group.
expert opinion	Consensus from the steering committee and working groups that developed these Standards.
family	May include parents, siblings, other relatives, guardians, carers or friends. If the child, adult patient or PSRACS resident is capable, family is who they define it to be.
Food First, food fortification	For the purpose of this document, food fortification refers to macronutrients only and is the process of enriching the energy, protein and/or fibre density of a food item by using another food item.
food service dietitian	Dietitians with food service training, skills and experience.
glycaemic index (GI)	A way that carbohydrates in foods and drinks are ranked according to how quickly they raise the glucose level in the blood.
health services	For the purpose of this document, health services refers to the combination of hospitals and public sector residential aged care services (PSRACS) in Victoria, and can be read as the organisation level for multi-site health services.
HealthShare Victoria	Established on 1 January 2021 (merging of Health Purchasing Victoria and Melbourne Health Logistics) as an independent public sector and commercially oriented provider of supply chain, procurement and corporate services to partner with Victoria's public health services and suppliers in delivering best-value health-related goods and services.
hospital	A public hospital in Victoria.
International Dysphagia Diet Standardisation Initiative (IDDSI) Framework	Common terminology for describing food textures and fluid thickness to improve safety for people with swallowing difficulties. The framework also provides testing methods for each texture and thickness.
National Health and Medical Research Council (NHMRC)	A statutory authority and the primary agency of the Australian Government responsible for medical and public health research.

Term	Definition
National Safety and Quality Health Service (NSQHS) Standards	The NSQHS Standards aim to protect the public from harm and to improve the quality of health service provision. They provide a nationally consistent statement of the level of care consumers can expect from health services. The NSQHS Standards were developed by the Australian Commission on Safety and Quality in Health Care, in collaboration with the Australian Government, states and territories, the health sector, patients and carers.
Nutrient Reference Values (NRVs)	A set of recommendations for nutritional intake based on currently available scientific knowledge.
Nutrition Steering Committee	Committee comprising senior representatives from dietetics, food services, medical, nursing, speech pathology and a consumer representative, with consideration of pharmacy and risk and quality personnel. For food/fluid provision this committee has oversight of quality improvement initiatives; alignment to state and national safety and quality standards; food service policy/procedure changes; and works within the health service's existing governance structure.
oral nutrition supplements (ONS)	Provide both macronutrients and micronutrients. Predominantly prescribed by dietitians to supplement nutrition intake in the clinical treatment of people who cannot meet their nutrition requirements through food alone, or as part of a treatment plan for specific medical conditions.
patient	A person receiving care or medical treatment in a public hospital in Victoria.
portion control (PC)	Any single-serve food product that can be consumed directly in its entirety by the patient/consumer.
public sector residential aged care services (PSRACS)	Public sector residential aged care homes (services) across Victoria. For the purpose of this document other services are excluded – for example, in-home aged care services and community health services.
recommended dietary intake (RDI)	Average daily dietary intake level that is sufficient to meet the nutritional requirements of nearly all (97–98 per cent) healthy people in a particular life stage and gender group.
reference person	Defined for the purpose of establishing minimum nutrient requirements and based on reported statistical characteristics of the populations of Victorian public hospitals and PSRACS.
resident	An older person living in a PSRACS. It is acknowledged that there may also be younger residents, and this will be identified as part of the population assessment and accounted for during the menu/meal development. The concepts of choice and variety apply to all.
room service menu	In the style of hotel room catering, a menu providing multiple options for different meals is provided and can be ordered, prepared and delivered at the patient's or resident's convenience.
short order menu	These items can be ordered as a replacement, or in addition, to the daily set menu choices. This can be useful for long-stay patients to add variety and can also be used to provide paediatric and additional vegetarian options.

Term	Definition
spoken menu	Where the menu options are read out to patients/residents and selections entered on their behalf. Generally undertaken by food service personnel but may be assigned to other staff.
suggested dietary target (SDT)	Daily average intake from food and beverages for certain nutrients that may help prevent chronic disease.
texture modified (TM) food and fluids	Where the consistency of food or fluids has been altered to enable a person to chew and swallow safely, without choking.
textured vegetable protein (TVP)	Meat alternative suitable for vegetarian and vegan meals. TVP is a processed, dehydrated product made from the remaining soybean flour after soybean oil has been extracted. High in protein, and low in fat, TVP is suitable for meals such as spaghetti bolognaise, shepherd's pie and chilli con carne. TVP is not suitable to puree.
these Standards	The term '**these** Standards' is used to describe this complete document, encompassing the best practice Standards, plus the Nutrient banding and minimum menu choice tables
the Standards	Refers to the specific recommended best practice standards relevant to adult patients/residents in section 3 'Standards'.
therapeutic diet	A food and fluid plan where the nutrient profile has been modified to meet the nutritional needs of a patient or resident. This forms part of their medical treatment to prevent symptoms and/or improve nutrition status. Examples include clear fluids, low-residue, renal, gluten-free and low-salt.
upper level of intake (UL)	The highest average daily nutrient intake level likely to pose no adverse health effects to almost all people in the general population. As intake increases above the upper level, the potential risk of adverse effects increases.
Victorian Agency for Health Information (VAHI)	A division of the Victorian Department of Health established to collate, analyse and publish data and information on the performance of Victoria's healthcare system.

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