Introduction

The Agency for Clinical Innovation (ACI) has reviewed the Nutrition Standards (revised Standards) to support the provision of tasty, nutritious food that meets the clinical and cultural needs of patients in NSW Health facilities. Nutrition Standards are the interface between nutrition as part of clinical care and operationalisation of food delivery. They are used by food service providers including HealthShare to guide menu design and food service delivery planning. The revised Standards will replace the existing Nutrition Standards for Adults (2011), Paediatrics, (2011) and consumers of inpatient mental health services (2013).

The revised Standards have been drafted by an expert committee made up of clinicians, food service dietitians, clinical nutrition and dietetic managers and representatives from HealthShare. They incorporate feedback from formative consultation conducted with clinicians, food service providers, food industry and consumers, and are evidence informed. They outline guiding principles, nutrient goals, and minimum choices that should be provided when designing menus for NSW Health facilities. They also define minimum serve sizes and provide tips and guidance to design menus for existing and future food service delivery models that meet patient requirements.

Before you commence the feedback survey, please review:

- This consultation draft of the revised Standards noting this PDF is *not the finished product*, but it does include the proposed content and indicate the proposed format.
- The companion document which summarises the main changes.

Please contact Kim Crawley, Nutrition Network Manager at ACI-Nutritionnetwork@health.nsw.gov.au if you have any questions.

Nutrition Standards (Webpage design map)

Introduction

Overarching Principles

Background – Purpose, Scope & Outcomes

Glossary

Therapeutic Diet Specifications

The Bands

Standards Validation

User Guide

Development History

References

Assessing against the Standards *(coming soon)*

Adult Inpatients

Nutrient Goals

Paediatric Inpatients

Nutrient Goals

Mental Health Inpts

Nutrient Goals

Nutrient Goal *section is comprised of: Nutrient, nutrient goal (NRV sourced), nutrient goal standards and commentary.*
Nutrient goal standards *are nutrient focused action statements which guide compliance to the standards.*

Menu Choice

Menu Choice

Menu Choice

Menu Choice *section is comprised of: Menu item, minimum choice, minimum serve size and menu design standards.*
Menu design standards *are action statements which guide compliance to the standards. The menu design standards are focused on the variety of options that should be included in the menu design to provide variety of food options – taste, presentation and texture, and which will also help in meeting nutrient goals.*

Special Considerations

Special Considerations

Special Considerations

Our Patients

Our Patients

Our Patients

Contains assessable criteria used to determine compliance.

Contains supportive reference information.

Table of Contents [For draft navigation only. Final product will be web based.]

Introduction:

Nutrition is important, especially when unwell.

During times of illness or injury, food intake can be reduced due to:

- the physiological effects of illness (e.g., pain, nausea, fatigue) reducing person's ability or desire to eat, [1,2]
- interruptions at mealtimes, such as doctor's rounds and tests
- changes to the types and quantity of food a patient can eat, such as provision of test diets (fluid diets) or fasting requirements (nil by mouth),
- limited flexibility with mealtimes and available food, such as limited access to nourishing snacks between meals and limited food choices
- lack of assistance to eat
- lack of identification and monitoring of patient's nutritional status and food intake

In addition to the above patients in health facilities may also have increased nutrition requirements, increased nutrient losses, or experience malabsorption. All the above increase the risk of patients admitted to a health facility having poor nutrition or malnutrition. Patients can also be at risk of, or be malnourished, at the time of their admission, or they may develop malnutrition during their hospital stay [3,4]. Malnutrition rates in an acute hospital setting can be as high as 40% of all admitted patients [3]. The risk of malnutrition becomes more acute for patients as they age, or the longer they stay in hospital. [4,5,6]. Patients in mental health facilities also have increased risk of chronic diseases. The provision of good nutrition care is an integral aspect of health care and is associated with better patient outcomes.

Food provided in a health care facility is important.

When a patient is unwell in a health care facility, it is essential the food and fluid provided meets their nutritional needs and assists in their recovery. Patients expect the food provided in a health care facility is good for them, while also being acceptable and familiar in terms of their developmental, cultural, and psychosocial needs. [5,6,7].

Food provided in hospital also supports psychological wellbeing. Mealtimes in hospital are often looked forward to and are a welcomed routine in the day. Eating may be one of few opportunities many patients have to retain independence, make choices, and take control over an aspect of their care, providing a positive milestone on the road to recovery. Familiar foods can provide comfort and security in unfamiliar situations [5].

NSW Health has a duty of care to provide excellent nutritional care and support to all inpatients. These nutrition standards are the interface between providing nutrition as part of medical care and the operationalisation of food delivery within NSW Health facilities. They outline the underlying principles, nutrient goals, and provide menu design guidance to support NSW Health facilities form policies and provide menus and food choices that meet patients' nutritional needs while they are in hospital. NSW Health clinicians are confident that food offerings based on the Nutrition Standards are safe and provide a variety of high nutritional and taste quality food choices.

Patients' Choice is Respected.

It is respected that a patient/consumer has the right to choose to consume foods from the facility menu, or to consume foods from other sources. (e.g., food from home, purchased outside of the facility). These choices are not in scope of the nutrition standards. Facility staff however can support patient/consumer by

providing guidance on safety considerations of eating food from other sources, or if there are therapeutic factors that need consideration, or around the appropriateness of the choices made.

References [Will be relocated to References page]

1.	Frost J, Baldwin A. 'Food for thought': The importance of nutrition to patient care and the role of the junior doctor. Clinical Medicine. 2021;21(3): e272-e274.
2.	Leach R, Brotherton A, Stroud M, Thompson R. Nutrition and fluid balance must be taken seriously. BMJ. 2013;346(feb08 1): f801-f801.
3.	Barker L, Gout B, Crowe T. Hospital Malnutrition: Prevalence, Identification and Impact on Patients and the Healthcare System. International Journal of Environmental Research and Public Health. 2011;8(2):514-527.
4.	Australian Commission on Safety and Quality in Health Care. Hospital Acquired Complication - Malnutrition. Australian Commission on Safety and Quality in Health Care; 2018 p. 1-10. Available at: https://www.safetyandquality.gov.au/sites/default/files/migrated/SAQ7730_HAC_Malnutrition_LongV2.pdf
5.	NSW Health Policy - Nutrition Care PD2017_041 [Internet]. NSW Health Policy. 2017 [cited 21 March 2022]. Available from: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_041.pdf
6.	Walton K. Treating malnutrition in hospitals: Dietitians in the driving seat? Nutrition & Dietetics. 2009;66(4):202-205.
7.	Naber T, Schermer T, de Bree A, Nusteling K, Eggink L, Kruimel J et al. Prevalence of malnutrition in nonsurgical hospitalized patients and its association with disease complications. The American Journal of Clinical Nutrition. 1997;66(5):1232-1239.

Other…

National Institute for Health and Care Excellence. Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition [cg 32]. (UK) 2006; Available from: https://www.nice. org.uk/guidance/cg32/resources/nutrition-support-for-adults-oral-nutrition-support-enteral-tubefeeding-and-parenteral-nutrition-pdf-975383198917.

2. Independent Hospital Pricing Authority (AU). Activity Based Funding Admitted Patient Care 2015–16, acute admitted episodes, excluding same day.

Overarching Principles:

The following principles underpin a person-centred menu and meal service.

1. **NSW Health inpatients will have access to safe, appropriate, and adequate food and fluids as an essential component of patient-centred care and treatment**. This is particularly important for people who may require assistance or guidance to make informed nutritional decisions, and for people at risk of nutritional issues, food allergy or requiring texture-modified and therapeutic diets.

2. **Menu design will be meet the needs of the consumers and residents who will be engaged the menu design process.** The menu design process will apply best-practice principles in menu planning, considering the length of stay, physiological and clinical needs, cultural and religious preferences, and developmental requirements. The priority goal is normalising eating, while being consistent with current nutrition and health promotion guidelines.

3. **The menu will offer appetising, visually appealing, well presented, enjoyable and age-appropriate food choices**. This will support individuals to meet their nutritional requirements and accommodate psychosocial and developmental needs.

4. Variety with respect to food colour, texture, taste, aroma, and presentation will be offered within a meal, over each day and throughout the full menu cycle.

5. The menu design and choices offered will maximise opportunities for patients/consumers /residents to choose at least the minimum number of serves from each of the core food groups recommended in the Australian Dietary Guidelines (ADG) (https://www.eatforhealth.gov.au/guidelines/australian-dietary-guidelines-1-5).

6. Menus will offer enough food and fluids to enable all consumers to meet their Recommended Dietary Intake (RDI) targets and ensure satiety. (https://www.nrv.gov.au/) .

7. Menu design will provide a range of choices for all diet types, including therapeutic diets. To achieve this, alternative food options to support choice will be made available. Menu planning, product development and procurement should optimise the use of items for the main menu and a range of therapeutic diets.

8. Patients will have access to safe and appropriate food and fluids outside of usual meal delivery hours.

9. Where possible, a person's nutritional requirements will be provided from food and fluids. Fortification and enrichment of commonly eaten foods should be made available when indicated. Oral supplements should not be a substitute for provision of adequate food and fluid unless clinically indicated.

10. Clinicians and food service providers will ensure meal service meet nutritional needs and meal expectations of our consumers. Sustainability will be considered and inform menu design and product procurement, but not compromise the provision of nutritious food and consumer choice.

Purpose, Scope and Outcomes:

Purpose – Why Nutrition Standards are Important.

The Nutrition Standards are part of the NSW Health framework for a strategic and coordinated approach to nutrition care for people admitted to NSW Health facilities as outlined in the Nutrition Care Policy Directive (PD2017_041). (1)

Nutrition Standards ensure people admitted to NSW health facilities are provided with meals that:

- are safe, nutritious, appetising and high-quality with sufficient variety
- meet a person's nutrient requirements
- are appropriate for their stage of development (for paediatric patients)
- enhance their experience in hospital, thus meeting psychosocial needs and expectations in respect to food.

They do this by:

- providing a sound nutritional and evidence base for health facility menus,
- establishing principles that ensure a person-centred food and nutrition service
- providing an opportunity for patients to choose healthy foods

The standards are grounded in evidence-informed healthy eating messages but also reflect the diverse needs of peoples admitted to NSW Health facilities. While the standards provide opportunities for patients to choose healthy food, they also allow for patients to select popular foods and fluids they enjoy.

Scope – Where the Nutrition Standards Apply.

What health facilities will use these standards.

Nutrition Standards define the baseline food and nutrition needs of adult and paediatric inpatients and are used as the basis of menu design in NSW Health facilities. They are designed to be appropriate for most patients in hospital, and guide NSW Health services to design a hospital menu to meet the nutritional needs of most hospital patients by providing opportunity for a patient to choose the minimum number of core food groups from a variety of choices. A menu designed based on the standards will meet the needs of most patients without the need to rely on a therapeutic diet / enhanced diet to meet nutritional needs. Patients however will have access to therapeutic diets if they have needs that cannot be met by the standard menu or if they are required to be on a therapeutic diet as part of their medical management.

In mental health or other long stay facilities, the standards also apply to special occasions such as barbeques, rehabilitation cooking programs, food prepared in activity of daily living kitchens, lunch packs for those on day leave, and independent living situations – when the menu items / foods are selected and supplied by the facility food service provider or facility /unit.

The standards apply to all food service delivery models which offer variations in menu design including, but not limited to, static menu on-demand ordering, paper menus, buffet / bulk delivery service, spoken menus or other electronic ordering systems.

Our patients Nutritional and Dietary Requirements.

Patients admitted to NSW Health facilities are a heterogenous group, who will have variations in their nutritional needs. When planning the menu for health facilities, it is important to try to meet the nutritional requirements for 'most' patients with the menu choices offered.

Inpatients in NSW health facilities can be classified into four nutritional categories:

1. People who are **nutritionally well** – previously healthy patients with good appetite and dietary needs in line with the general population admitted for:
   - minor illnesses or elective surgery
   - uncomplicated maternity patients
   - illnesses that result in a relatively short stay.

2. People who are **nutritionally at risk**, who have:
   - been admitted to hospital with poor appetites or inadequate food intakes
   - previous unexplained or unintentional weight loss
   - physical difficulty eating and / or drinking, including poor dentition leading to eating fatigue and lack of interest in food
   - acute or chronic illness or medical treatments affecting appetite and food intake
   - cognitive and communication difficulties, creating difficulties with ordering appropriate food and drinks. (A higher proportion of the paediatric patient group fall into this category).

3. People with **high nutritional needs**, including those:
   - with increased nutritional requirements due to cachexia, trauma, surgery and / or burns
   - who are malnourished or failing to thrive (paediatrics)
   - lactating women.

4. People with **special dietary needs**, including those:
   - with cultural, religious dietary needs and practices (such as Halal and Kosher meals)
   - requiring therapeutic diets due to specific diseases
   - requiring texture-modified food and drinks.

Some specific nutritional needs cannot be fully satisfied by a standard inpatient menu. In these instances, the facility must offer the opportunity for a patient to be transitioned to a diet targeting their specific needs. These diets include therapeutic diets, operational diets or diets for religion / culture / lifestyle / life stage. The composition and design of these diets are guided by the ACI Diet Specifications .

The nature of some diets (therapeutic diets, religious, cultural and lifestyle diets, life stage diets, operational diets) means they may not be able to meet the standards. For those that are unable to comply, an exemption for compliance may be endorsed by the ACI Diet Specifications Reference Group when documenting the specification for that diet and that reason for noncompliance must be documented on the diet specification for that diet. ACI Diet Specifications . It is intended that all diets provided within NSW Health comply with the overarching principles of the nutrition standards. Table 1 outlines the compliance matrix for nutrition standards.

Table 1: Compliance Matrix

Diet Group	Nutrient goal standards compliance	Menu choice standards compliance	Comments
Standard Diets	MUST comply	MUST comply	
Religious / Cultural / Lifestyle Diets	MUST comply	Should comply. *	Some religious, cultural and lifestyle diets will be able to comply with the menu choice standards. If it is feasible, they must comply.
Supporting patient Consumption Diets (Operational diets)	MUST comply	Should comply. *	Some operational diets will be able to comply with the menu choice standards. If it is feasible, they must comply.
Life stage diets	MUST comply	Should comply. *	Some life stage diets will be able to comply with the menu choice standards. If it is feasible, they must comply.
Therapeutic diets	Should comply. *	Should comply. *	Some therapeutic diets will be able to comply with the nutrition goal and menu choice standards. For instance, High fibre, high soluble fibre, lower fat diets, fluid restriction diets. If it is feasible, they must comply.

Should comply. *

The nutrient composition or modifications in a diet may prevent their ability to comply with the standards. Aa clear fluid diet that is unable to meet the Standards. For those that are unable to comply, an exemption for compliance may be endorsed by the ACI Diet Specifications Reference Group when documenting the specification for that diet. The reason for non-compliance must be documented on the diet specification for that diet. ACI Diet Specifications

What staffing and stakeholder groups will use these standards.

The NSW Health Nutrition Standards will apply to all NSW Health staff involved in all aspects of food service and nutritional care in a NSW Health facility.

This includes:

- staff involved in food service delivery model design, menu planning, food production and procurement, and the delivery of of food and fluids to the patient / consumer
- staff involved in the nutritional care of inpatients / consumers.

The standards are also used by food industry partners to provide consistent guidelines to food manufacturers who wish to develop food products for hospitals.

Key staff stakeholder groups may include:

- Clinicians – this includes Dietitians, Dietitian Assistants, Allied Health Assistants, Speech Pathologists, other Allied Health staff, Medical staff and Nursing staff.
- Clinical service managers – this includes Managers of Nutrition Services, and managers of other clinical services and units involved in the nutrition care of inpatients / consumers.
- Food Service Providers – this includes food service department staff and management, who plan, produce, procure and deliver food products to inpatients / consumers of inpatient NSW Health faciltities.
- Food industry partners – this includes food manufacturers or suppliers of food products which are included on the menu for inpatients / consumers of inpatient NSW Health faciltities.

What aspects are excluded from the scope of these standards.

The NSW Health Nutrition Standards do not provide a framework for the following:

Food Service Operations:

The following food service operation activities are out of scope of the Nutrition Standards:

- The design of food service delivery models implemented in NSW Health facilities.
- Operationalisation of food service models.
- Food product range and choices available at facilities
- Recipe development
- Food production / operations
- Staffing requirements, skills or duties
- Provision of food for staff, visitors or non admitted patients.
- Menu design for admitted day stay patients (e.g., renal dialysis and chemotherapy) and day surgery patients. These patients will be offered suitable choices from the standard menu as per local facility procedures.

The provision of a food service model in a facility is determined by the key facility stakeholders and the food service providers. The Nutrition Standards do not govern the food service delivery operations in a facility.

Clinical Care:

The following components of clinical care and diet management are out of scope of the Nutrition Standards:

- Nutrition risk screening; nutrition assessment; nutritional care planning; planning and delivery of foods and drinks; the mealtime environment; assistance to eat and drink; staff training and education; and patient monitoring. These aspects of clinical care are governed by the Nutrition Care Policy Directive (PD2017_041). (1)
- Therapeutic diets – diets required for patient with special nutritional needs which are used as part of medical therapy. Therapeutic Diet Specifications:
- Foods / menu items selected by the consumer, prepared by the consumer and funded by the facility / unit, (e.g., for the purpose of consumer skills training). It is recommended that facilities / units follow the the *'Healthy food and drink in NSW health facilities for staff and visitor's framework'* (2).

Expected Outcomes – What will the Nutrition Standards Achieve?

It is expected that each NSW Health inpatient facility will offer

- a menu that meets these standards and considers the opinions of consumers in relation to food presentation, appearance and taste
- a food service system that meets the nutritional needs of their patients, including specific patient groups
- food choices and variety which is consistent with the needs and preferences of the patient profile of the facility.

References: [Will be relocated to References page]

1	NSW Health Policy - Nutrition Care PD2017_041 [Internet]. NSW Health Policy. 2017 [cited 21 March 2022]. Available from: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_041.pdf
2.	NSW Ministry of Health Centre for Population Health. Healthy food and drink in NSW health facilities for staff and visitor's framework. North Sydney: NSW Health; 2017.

Adult Inpatients | Nutrient Goals:

Key changes to this section include:

- Design the nutrient Standards so they can be used as a compliance criteria for auditing
- Commentary around incorporating higher salt food choices
- Vitamin D guidance statement

No changes made to

- Upper limit for sodium

Nutrient Goals – Adults.

Nutrient goals guide the amount of a nutrient which needs to be consumed to avoid the health risks of deficiency or over consumption. They are evidence informed and form the basis of nutrition recommendations.

In menu planning for inpatients, it is important that the standard hospital menu **provides opportunity** to meet the nutrient goals from a range of meal items chosen from the menu (assuming it was eaten). Providing this range of food choices reduces the risk of inpatients developing malnutrition during their admission and supports patients to make healthy choices for chronic disease management.

Nutrient goals are nutrient reference values guided by the 2017 Nutrient Reference Values for Australia and New Zealand (5). When planning for heterogeneous groups, such as hospital inpatients, where nutrient requirements are not uniform across the group (due to age and gender variables), generally the upper reference value appropriate for the hospital population was chosen. These values provide a high level of assurance that most patients will be able to meet their individual nutrient needs from the standard menu.

The standard hospital menu should be capable of meeting nutrient targets for:

- daily energy
- daily protein
- micronutrients (vitamins and minerals) and other macro nutrients averaged over a week

Nutrient goal standards are recommended actions that are required to be achieved to design a menu with capability of meeting the nutrient goals. They allow for the ability to benchmark the suitability of hospital menus from a nutritional perspective. This is achieved by assessing compliance to the nutrient goal standards.

Rationale / commentary provides explanations of any variation or considerations in defining the nutrient goal targets. They also outline key considerations used to develop nutrient goal standards for the nutrient.

When developing the nutrient goals, nutrient goals were not listed for all nutrients outlined in the Nutrient Reference Values for Australia and New Zealand. Nutrients likely to be important to hospitalised patients were prioritised. An assumption is made that if menus are designed to meet specified nutrient goals, it is likely the requirements for other essential nutrients (e.g., thiamin, vitamin A, magnesium or potassium) will also be met.

Application Tip:

When assessing a menu against the Nutrient Goals, the objective is that the menu complies to the criteria outlined in the Nutrient Goals and Nutrient Goal Standards columns.

Macronutrient Goals

Formatting of content to be considered. Refer to sample of alternative format.

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Energy	8000kJ/day	• The menu provides opportunity to choose a range of food and fluids of appropriate energy content to achieve the nutrient goal for energy.† • Access to large serves or extra serves is available. Similarly access to small serves should be available where required • Energy dense foods and fluids (e.g., nutrient-dense soup, desserts) are offered at each meal. • Access to energy fortified / nutrient dense options are available for those with smaller appetites. • A high energy mid-meal snack, with at least 500kJ per serve is offered once per day, and available to access at other times for those who require additional energy. (This may be a combined high protein / high energy snack.) • A lower energy mid-meal snack, with not more than 400kJ per serve is offered at each mid meal.	• 8000kJ is based on a reference adult male of 76kg‡, 105 kJ/kg/day. (1,2,3,5) • Individuals' energy requirements will vary and are increased in the malnourished, those with certain diseases and during some treatments. • Insufficient energy intake is a common cause of poor nutritional status, particularly for elderly patients. • Mechanisms are needed for patients with higher energy needs to achieve these intakes while selecting from the standard menu. This may include access to additional food options, fortified foods or nourishing snacks, access to therapeutic diets or additional nutrition support.
Protein	90g / day	• The menu provides opportunity to choose a range of food and fluids of appropriate protein content to achieve the nutrient goal for protein†. • High quality protein options are available at each mealtime. This includes a variety of meat, poultry, fish, legumes, milk,	• 90g is based on a 76kg‡ adult, who is a hospital inpatient but not severely ill or injured using a mid-range protein requirement (1,2). (1.2g/kg/day) • This protein requirement is higher than the RDI for healthy adults (0.75g–1.1g/kg/day) (4) to address

† This is determined following an assessment of a minimum 1 weeks' worth of test menus, calculation of the provision of the target nutrient and comparison against the nutrient goal. The nutrient goal for energy and protein must be achievable daily, and the nutrient goal for other nutrients can be achieved on average on a weekly basis.

‡ National Health Survey: First Results, 2017-2018 –Median weight for >18yo females was 68.2kg and for >18yo males was 84.5kg. Mid-range for females and males is 76.3kg.

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		eggs, cheese, yoghurt and custard. • A protein source, with at least 5g protein per portion, is offered at breakfast. • Access to large protein serves or extra serves is available. • Access to protein fortified / nutrient dense options are available for those with smaller appetites or increased needs. • A high protein mid-meal snack, with at least 3.0g protein per serve is offered once a day, and available to access at other times for those who require additional protein. (This may be a combined high protein / high energy snack.)	higher needs most hospitalized patients, including pregnant and lactating women, non-stressed older people through to those recovering from surgery. • Individuals' protein requirements will vary and are increased in the malnourished, those with certain diseases and during treatments. • Mechanisms are needed for some patients to achieve higher protein intakes. This may include access to additional food options, fortified foods or nourishing snacks, access to therapeutic diets or additional nutrition support. • It is expected that patients requiring higher values of protein (>1.5 g/kg/day) would be identified through effective hospital nutrition screening and prescribed an appropriate therapeutic diet.
Fat	-	• Low fat / reduced fat products are included on the menu as an option in addition to full fat options. • Less than 20% of hot main menu items have more than 15 g fat per serve.	• The Nutrient Reference Values for Australia and New Zealand do not prescribe a recommended daily intake or upper limit for total fat (5) • Low-fat diets are not appropriate for a large proportion of hospital patients who require diets with increased energy and nutrient density. • The menu should not be designed to be low in fat, but should not be high in fat. • The menu must provide opportunity for consumers to choose a range of lower fat foods food and fluids if preferred.

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Saturated Fat and Trans Fat	Ideally, not more than 10% of energy should be from trans and saturated fat, with an upper limit of 13%.	• A choice of mono-unsaturated or poly-unsaturated spreads are offered at each meal. • Hot mains are cooked with unsaturated fat, where appropriate. • Vegetables dishes are cooked with unsaturated fat, where appropriate. • Potato, rice and pasta dishes have saturated fat levels less than 2g saturated fat per standard serve. • Desserts are prepared with unsaturated fat, where appropriate. • Sandwiches are prepared with mono-unsaturated or poly-unsaturated margarine.	• The menu should allow patients to select lower saturated fat options. • Food preparation must incorporate use of lower saturated fat ingredients. • Access to a therapeutic low saturated fat diet is to be available for those consumers who require a lower prescribed saturated fat intake.
Carbohydrate	-	• At least one low glycaemic index (GI) food choice is available per meal. • All breakfast cereals contain less than 30g sugars/100g • All canned fruit is in natural fruit juice or water, and not syrup. • All fruit juice is 100% juice with no added sugar.	• The Nutrient Reference Values for Australia and New Zealand do not prescribe a recommended daily intake or upper limit for carbohydrate (5)
Fibre	30g/day	• The menu provides opportunity to choose a range of foods of appropriate fibre content to achieve the nutrient goal for fibre†. • At least 50% of cold breakfast cereals provide at least 3g fibre per serve. • Whole meal /multi grain bread is offered at all meals as an alternative to standard white bread. • Sandwiches made with whole meal / multi grain bread are offered. • Fruit (fresh, canned) is offered at each main meal and is available as a midmeal option.	• 30g is the daily adequate intake (AI) for adult males. 25g is the daily adequate intake (AI) adult females and 27-30g is the daily adequate intake (AI) for pregnant and lactating females. (5) • Consuming adequate fibre may prevent and assist with managing constipation. • The action of fibre in preventing constipation depends on an adequate fluid intake.

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		• Vegetables are offered at a minimum of 2 main meals per day. • A main salad is offered as an alternative to a hot main or sandwich.	
Fluid	2.1–2.6L/day	• Water is made available at the bedside of all patients for whom it is clinically suitable. • A selection of beverages is offered at all meals and mid-meals.	• 2.1L is the daily adequate intake (AI) for adult females, and 2.7L is the daily adequate intake (AI) for adult males. (5) • Consuming adequate fluids prevents dehydration and assists with preventing constipation. • The menu, and food service model, must provide opportunity to access and choose a range of fluids to achieve the nutrient goal for fluid. • Fluid includes water, milk and other drinks (5).

Micronutrient Goals

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Sodium	Upper intake limit 2300 mg/day	• The menu provides opportunity to choose a range of sodium containing food sources in a day without exceeding the upper limit nutrient goal for sodium†. • Not more than 10% of hot main menu items to have more than 575mg sodium per serve over the menu cycle. (Core main menu only, does not include background menu choices). • High sodium choices included on the menu have an additional high quality nutritional benefit. Eg, also high protein. • Vegetables are cooked without added salt. • Multi ingredient potato, rice and pasta dishes have less than 300mg sodium per serve.	• The Nutrient Reference Values for Australia and New Zealand do not prescribe an upper limit (UL) for sodium, with a stipulation that this does not mean that consumption is safe any any level. They do suggest a daily target of 2000mg. (5,6) • Maintaining an upper limit of 2300mg per day, which was the 2006 UL value, allows for inclusion of varied foods which improve variety and palatability, to optimise food intake for inpatients. It is also in acknowledgement of the reliance on commercial food supply in hospital menu design, and the recognition that these products often have a higher sodium content.

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		• Single ingredient potato, rice and pasta dishes are cooked without added salt. • Bread has less than 400mg sodium per 100g. • Salt sachets are available as an option. (Salt sachets are not counted in the sodium content of a meal. They are an addition made by the patient. • Default menus are designed to provide not more than 2300mg / sodium per day. • Not more than 10% of the range of midmeal and snack options to have more than 300mg sodium per serve.	• The menu should not be designed to be low in sodium, but should not be high in sodium. • The menu must provide opportunity for a paitent to choose food items totalling <2300mg sodium in a day. • Inclusion of higher salted foods (such as cheese and ham) or meals, which are nutritionally dense and well accepted by patients who are unwell or eating poorly, is acceptable. • Menu planning must consider when higher sodium choices are offered that there are also lower sodium options within that menu group to moderate sodium provided. Similarly, the same consideration applies for side dishes. If a high sodium main dish is offered, lower sodium sides should be offered at that meal. • When a default menu is provided, it should be designed to not exceed the daily sodium upper limit. • Sodium intake reduction is a key public health goal. (5,6,8) • During acute illness, sodium intake, especially if high, can contribute to increased blood pressure, and contribute to disorders of sodium and fluid balance. (9,10)
Vitamin C	45 mg/day	• The menu provides opportunity to choose a range of Vitamin C food or fluid sources to achieve the nutrient goal for Vitamin C†. • Uncooked sources of vitamin C are offered at each main meal and midmeal. These include fresh fruit, raw vegetables, juices, or salads. • Juices contain at least 20mg Vitamin C per 100ml.	• 45mg is the RDI for adult males and females. Pregnant and lactating females have increased requirements (60 – 85mg). (5) • Vitamin C is a significant vitamin for healing and infection resistance. (11) • There are large losses of vitamin C in food service

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
			handling, processing, and cooking. (12,13) • Uncooked sources of vitamin C must be available to reduce the risk of deficiency. • Fruit juice is a practical and easily consumable source of vitamin C for population who may have reduced appetite and intake tolerance, and therefore may be less likely to consume raw fruits and vegetables when unwell.
Folate	400µg/day	• The menu provides opportunity to choose a range of folate containing food sources to achieve the nutrient goal for folate†. • Folate fortified breakfast cereals are offered daily • A choice of vegetable items is offered to allow for selection of 5 serves of vegetables per day. • A choice of fruit items is offered to allow for selection of 2 serves of fruit per day.	• 400µg is the RDI for adult males and females. Pregnant and lactating females have increased requirements (up to 600µg). (5) • There are large losses of folate in cooking and processing (14)
Calcium	1000 mg/day	• The menu provides opportunity to choose a range of calcium containing food sources to achieve the nutrient goal for calcium†. • Dairy products are offered at every main meal and mid meal. • Soy milk or non dairy milk alternatives are available and contain at least 100mg calcium per 100ml.	• 1000mg is the RDI for 19-70 yo males and 19 – 50yo females. This requirement increases to 1300mg males over 70 and females over 50. 1000-1300mg is the RDI for pregnant and lactating females. (5) • Dairy products are the commonly preferred source of calcium however, alternative (non dairy) calcium options must be available to meet patient preferences. • Opportunites must also be available for patients with increased calcium needs, eg, women or older persons, to access additional serves.
Iron	11 mg/day	• The menu provides opportunity to choose a range of iron containing	• 18mg is the RDI for 19 – 50yo females. 8mg is the RDI for

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		food sources to achieve the nutrient goal for iron†. • Iron fortified breakfast cereals are offered daily. • Red meat is offered in at least one main dish / sandwich / main salad per day. • Whole meal breads, eggs, legumes, and white meats are offered on the menu to broaden the variety of iron sources. • A vitamin C source is offered at the same meal (to promote iron absorption).	all other age groups. 27mg is the RDI for pregnant females, and 9mg is the RDI for lactating females. (5) • 11mg was chosen as a minimum provision with consideration that ~25% of the hospital population will have increased requirements.
Zinc	14 mg/day	• The menu provides opportunity to choose a range of zinc containing food sources to achieve the nutrient goal for zinc for each age group†. • Meats, fish and poultry are offered daily on the menu. • Cereals and dairy foods are offered daily on the menu.	• 14mg is the RDI for adult males. 8mg is the RDI for adult females and 11 -12mg is the RDI for pregnant and lactating females. (5) • Zinc is a significant mineral with respect to wound healing and immune function. (11) • Zinc depletion is associated with decreased taste acuity and poor appetite (11,15) • Ensuring adequate intake of energy, protein provide opportunities for meeting the zinc requirement.
Vitamin D	-	• Margarine spreads are fortified with Vitamin D. • Fish is offered at least two three times per week (in main meals, salads or sandwiches). Oily fish such as salmon, is preferred. • Eggs are available daily on the menu.	• 80µg is the upper limit for adult males and females. (5). • Analysis limitations impact the ability to assess actual intake of Vitamin D. • A nutrient goal is therefore not defined for the standards. • Reporting of Vitamin D intake is not required when assessing against the standards.

References [Will be relocated to References page]

1	National Health Survey: First Results, 2017-2018 - Table 8.1 Body Mass Index, waist circumference, height and weight(a)(b), Persons https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release
2	National Institute for Health and Care Excellence (NICE) – Guideline CG32 Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition, August 2017. 1.4 What to give in hospital and the community https://www.nice.org.uk/guidance/cg32/chapter/1-Guidance
3	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Dietary Energy**. https://www.nrv.gov.au/dietary-energy
4	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Protein**. https://www.nrv.gov.au/nutrients/protein
5	Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes, 2006, Upd 2017, NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/about-us/publications/nutrient-reference-values-australia-and-new-zealand-including-recommended-dietary-intakes
6	Australian and New Zealand Nutrient Reference Values for Sodium. A report prepared for the Australian Government Department of Health and the New Zealand Ministry of Health, 2017 https://www.nrv.gov.au/sites/default/files/content/resources/2017%20ANZ%20NRVs%20for%20Sodium%20%28containing%20recommendations%29.pdf
7	National Health Survey: First Results, 2017-2018 https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release
8	Eat for Health - Australian Dietary Guidelines. Providing the scientific evidence for healthier Australian diets, 2013.NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/adg
9	Bagshaw S, Townsend D, McDermid R. Disorders of sodium and water balance in hospitalized patients. Canadian Journal of Anesthesia/Journal canadien d'anesthésie. 2008;56(2):151-167.
10	Australian and New Zealand Nutrient Reference Values for Sodium. Supporting Document 1 Systematic Literature Review. 2017. https://www.nrv.gov.au/sites/default/files/content/resources/2017%20Sodium%20SD1%20-%20Literature%20review.pdf
11	Nutrition Care Manual [Internet]. Nutritioncaremanual.org. 2022 [cited 15 August 2022]. Available from: https://www.nutritioncaremanual.org/
12	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Vitamin C**. https://www.nrv.gov.au/nutrients/vitamin-c
13	Vitamin C factsheet for health professionals – March 2021, National Institute of Health, Office of Dietary Supplements, US. [Internet]. Ods.od.nih.gov. 2022 [cited 15 August 2022]. Available from: https://ods.od.nih.gov/factsheets/VitaminC-HealthProfessional/
14	McKillop D, Pentieva K, Daly D, McPartlin J, Hughes J, Strain J et al. The effect of different cooking methods on folate retention in various foods that are amongst the major contributors to folate intake in the UK diet. British Journal of Nutrition. 2002;88(6):681-688.
15	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Zinc**. https://www.nrv.gov.au/nutrients/zinc

Adult Inpatients | Menu Choice:

Key changes to this section include:

- Design the menu choice standards so they can be used as compliance criteria for auditing
- Include more guidance around menu design
- Managing the needs of long stay patients

Menu Choice – Offering variety and opportunity.

"*To meet the nutrient requirements essential for good health, you need to eat a variety from each of the five food groups daily, in the recommended amounts. It is not necessary to eat from each food group at every meal. In fact, in some instances, you only need to eat some of the foods in each food group a couple of times a week. "(1) "It is also important to enjoy a variety of foods within each of the Five Food Groups because different foods vary in the amount of the key nutrients that they provide.* "(1)

https://www.eatforhealth.gov.au/food-essentials/five-food-groups

Choice is a key factor affecting food intake and satisfaction. (2) Providing guidance around the minimum frequency in which food groups should be offered, and guidance around the range of variety, improves the consumers range of choice, and can help prevent menu fatigue. It also helps to ensure patients are provided with a range of foods consistent with the core food group recommendations, (1) promotes consistency of service provision across the State, and equity of access.

Menu choice standards are comprised of three components:

- Minimum choices
- Minimum standard serve
- Menu design standards (global standards, and also menu item targetted standards)

Minimum choices outline quantified targets which provide the ability to benchmark the suitability of a hospital menu from a variety and choice perspective. Facilities are encouraged to extend the meal service and offer additional choices. The actual number of main meals and menu patterns are not specified, to allow flexibility in service delivery models, menu planning and implementation.

Minimum standard serves provides a guide around serving sizes for menu items. These take into consideration food industry norms which influence the packaging size of portion controlled products, and the minimum serve size acceptable to the patient.

Menu design standards are recommended actions that will guide the development of a menu which has good variety within meals and across the menu cycle.

Collectively, menu choice standards guide the provision of maximum opportunity for patients/consumers /residents to choose at least the minimum number of serves from each of the core food groups, at mealtimes they prefer, from a menu which is consistent with the overarching principles of the standards.

Application Tip:

When assessing a menu against the Menu Choice, the objective is that the menu complies to the criteria outlined in the Minimum Choices, Minimum Standard Serve and the Menu Design Standards columns.

Menu Choice Standards

- Designing a menu to promote variety and opportunity for choice.

Menu Design Standards

These menu design standards support the design of a menu which prioritises the needs and preferences of the consumer.

Menu Planning and Design:

- The menu offers the opportunity for the consumer to access, at a minimum, three main meals and two to three midmeals each day. This can be provided using varied food service delivery models.
- The menu demonstrates menu design qualities such as variation in ingredients, preparation styles, flavours, textures, cultural representations, and that repetition is considered and limited to avoid repetition of items at consecutive meals or on consecutive days. The exception to this may be if the menu is a static style menu, or if the items are popular and preferred items.
- The menu demonstrates variety across all menu components – including hot mains, sandwiches, salads, and desserts.
- The menu design demonstrates consideration of religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting.
- The menu design demonstrates cultural diversity, not just in the selection of main meal items, but also condiments and meal accompaniments.
- The menu design offers minimally processed foods at each meal and snack, and offers a fresh food choice at each mealtime.
- The menu design of default selections of a standard diet for the different age groups meets the nutrient goal standards but not necessarilly all menu choice standards.

Length of Stay Considerations:

For long length of stay admissions:

- A facility has in place mechanisms to identify their their very long length of stay admissions. (Admitted for 4 weeks or more)
- The menu design includes strategies to offer additional variety for consumers who are admitted for more than 4 weeks. This variety is not just limited to main meal choices, but other meal components also.

For short length of stay admissions:

- Where a facility is interested in a shorter stay menu – for particular services such as maternity units, it may be viable to have a cohort menu with alternative design (shorter cycle of reduced choice). This could be managed as an operational menu / therapeutic type menu which sits outside of the standards. If this strategy is adopted, the facility must provide rationale for the short stay menu, such as the average length of stay for the chosen cohort being 3 days or less and have processes in place to ensure high nutritional risk and longer stay patients are provided with additional options.

Menu Review:

- A framework exists which outlines how often the menu will be reviewed, with a menu review activity conducted at least every 2 years. A menu review activity may include occassional component review, or interchange of items (for example, based on seasonal availability) or a scheduled full menu review.

- A menu review must demonstrate consideration of the consumer needs and preferences of the consumers of the health facility. This includes the religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting.
- A menu review must demonstrate engagement and input from key stakeholders including, but not limited to, food service representatives, clinical dietitian representatives, and consumers and residents, or their carers, of the health facility.
- An assessment of the compliance of the menu to the nutrition standards should be completed every 2 years to assist in informing considerations for the menu review.

Formatting of content to be considered. Refer to sample of alternative format.

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
Fruit *Fresh or canned*	• 1 option at each main meal • 1 option at each mid meal	150 g fresh fruit (1 medium piece, 2 small pieces or 5 prunes) or 120g serve canned fruit	• A variety of fruit is offered including full pieces, canned options and cut up options.
Juice	• 1 option at each main meal	100mL	
Cereal – hot	• 1 option per breakfast meal	150 -180g cooked weight	
Cereal – cold	• 4 options per breakfast meal	Portion packs where available or 30g serve	
Breakfast - Protein *Continental or Cooked service*	• 1 option per breakfast meal (providing a min 5g of protein)	100-150g yoghurt, or 1 egg, or 20g cheese, or 110g baked beans	• Other low-protein options, such as spaghetti, tomato, and mushrooms, can be offered as optional additions.
Bread	• 2 options at each main meal	1 slice 1 roll (30g)	• A variety of bread is offered including white and either whole meal, wholegrain or multigrain.
Margarine and Butter	• 1 margarine option at each main meal. (1 portion to be used for 2 slices of bread)	Not less than 7g	• Butter may also be offered (optional)
Spreads	• 3 options per breakfast meal	Portion control packs where available	• At least 3 varieties are offered each day. E.g., Jams, marmalade, honey, and vegemite. • Other items such as peanut butter or low joule spreads are optional.

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
Cold beverages *Milk and other options*	• 2 milk options at each main meal and mid-meal • Water offered at all main and mid meals. • Other drinks optional	150mL	• Full cream and reduced fat milk are offered at each meal. • Soy milk to be available on request. • Flavoured milk optional. • Cordial and soft drinks optional.
Hot beverages	• Hot beverages are offered at 4 meal occasions per day	150mL 15mL milk for hot beverage	• More than one variety of hot beverage are offered. E.g., Tea and coffee decaffeinated and hot chocolate beverages.
Sugar and Sugar substitute	• 1 of each option – at meals when hot beverage or cereal served.	Portion control packs	• Offered as an option with cereals. • Offered as an option with hot beverages.
Soup	• 1 option – Band 1 – at 1 main meal occasion per day	180mL	• An option of a small serve size is available (where possible). • Any additional soups offered can be any Band
Hot choice (main) *Meat / fish / poultry / vegetarian*	• 2 options at 2 main meals occasions per day (4 options per day) - 1 option per meal – must be Band 1 or Band 2 – Meat / Poultry / Fish - 1 option per meal – any band Meat / Poultry / Fish or Band 1 Vegetarian - Optional: 1 unbanded option / comfort food choice.	As determined in bands.	• At least 1 hot choice per day must be red meat. This is excepted if red meat is offered in a main salad or sandwich on that day. • A variety of meat options are offered at consecutive meals. • 1 hot choice per day is a vegetarian option. This is excepted if a vegetarian main salad or sandwich is offered as an alternative. • *Note: Future goal is to move towards a minimum of 1 vegetarian main meal option per day as part of the main meal options.* • 1 comfort food option / non nutrition focused options can be included as a choice per

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
			meal, but it must be in addition to the minimum number of banded options. • An option of a small, standard or large serve size for hot main options is available. (Unless constrained by the nature of the item. E.g. pre-packaged meal, single serve item). • Protein and energy fortified options are available for those with small appetites.
Potato, rice, pasta and others*	• 2 options at each meal offering main hot choices.	75 – 120g	• An alternative to potato is offered at least once per day. • Rice or pasta is offered when it would be a typical accompaniment with a meal. • Recipe based dishes must comply to the sodium and saturated fat limits stated in the nutrient goal standards. • An option of a small, standard or large serve size is available. (Unless constrained by the nature of the item. E.g. pre-packaged meal, single serve item). • Protein and energy fortified options are available for those with small appetites.
Vegetables, including side salads	• 2 options at each meal offering main hot choices. • 1 option per day may be a Band 3 side salad. • Soups containing a significant amount of vegetable / serve can contribute to vegetable options.	70g per vegetable portion 90g side salad	• At least 1 red / orange vegetable is offered per day. • At least 1 one green vegetable is offered per day. • An option of a small, standard, or large serve size is available.

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
Sandwich	• 1 option – Band 1 – at 2 main meals per day.	2 slices of bread	• At least 1 sandwich option made with whole meal or multigrain bread is offered per day. • 1 sandwich per day is a vegetarian option. This is excepted if a vegetarian hot choice or main salad is offered as an alternative. • Varied serve size options are available including ½ sandwich, full sandwich and 1 ½ sandwich.
Salad – as a main meal	• 1 option – Band 1 or Band 2 – at 1 main meal per day.	Minimum of 4 different vegetables with minimum total weight of 90g	• Portion control salad dressings are offered. • An option of a small, standard, or large serve size for main salads is available. (Where practicable.)
Condiments	• May be offered or available on request.	Portion control pack	• A range of condiment options to be available. E.g., Tomato sauce, mayonnaise • Salt sachets are available.
Desserts	• 2 options per day at main meals • 1 option must be Band 1		
Nutrient dense snacks (high energy / high protein)	• 2 options at 1 mid meal per day	Portion control packs	• At least two different nutrient dense snacks options should be available each day (>500kJ per serve and at least one with >3g protein). Snacks can address both high energy and high protein. • Range should include both savoury and sweet options.
Other snacks	• 2 options at each mid meal per day	Portion control packs	• At least two different lower energy, nutritious snacks options should be available each day. (<400kJ per serve)

			• Range should include both savoury and sweet options.

* This menu group category includes, but is not limited to noodles, cous cous, and other grains. Bread is excluded as it is included in a separate menu group category.

Sample Minimum Choice Template

The number indicates the minimum number of choices for that group offered on the menu. These provide the opportunity for the patient to choose items at the mealtime. Eg: Spreads – 3 indicates that 3 choices of spreads are to be offered at that meal. +/- indicates an optional choice to offer.

	Breakfast	**Midmeal - AM**	**Lunch**	**Midmeal - PM**	**Dinner**	**Midmeal - Supper**
Fruit	Fruit - 1	Fruit - 1	Fruit - 1	Fruit - 1	Fruit - 1	
Juice	Juice - 1		Juice - 1		Juice - 1	
Cereal - hot	Hot cereal - 1					
Cereal - cold	Cold cereal - 4					
Breakfast – Protein	Protein source - 1					
Bread	Bread – 2 (White / wholemeal)		Bread – 2 (White / mulitgrain)		Bread – 2 (White / wholemeal)	
Margarine & Butter	Margarine – 1 +/- Butter - 1		Margarine – 1 +/- Butter - 1		Margarine – 1 +/- Butter - 1	
Spreads	Spreads - 3					
Cold beverages	Plain Milk – 2 (Full fat / reduced fat) +/- Other option - 1	Plain Milk – 2 (Full fat / reduced fat) +/- Other option - 1	Plain Milk – 2 (Full fat / reduced fat) +/- Other option - 1	Plain Milk – 2 (Full fat / reduced fat) +/- Other option - 1	Plain Milk – 2 (Full fat / reduced fat) +/- Other option - 1	Plain Milk – 2 (Full fat / reduced fat) +/- Other option - 1
Hot beverages	Hot beverage – 1 (Tea)	Hot beverage – 1 (Coffee)		Hot beverage – 1 (Tea)		Hot beverage – 1 (Tea)
Sugar /substitute	Sugar – 1 Substitute – 1	Sugar – 1 Substitute – 1		Sugar – 1 Substitute – 1		Sugar – 1 Substitute – 1
Soup			Soup – 1 (Band 1)			

Hot choice			Hot – Red Meat – 1 (Band 1) Hot – Fish – 1 (any band)		Hot – Poultry – 1 (any band) Hot – Vegetarian – 1 (Band 1) +/- Comfort food – 1 (unbanded)	
Potato, rice, pasta and others*			Potato – 1 Rice - 1		Potato – 1 Pasta - 1	
Vegetables, including side salads			Vege – Orange – 1 Vege – Any colour - 1		Vege – Green – 1 Vege – Side salad - 1	
Sandwich			Sandwich - white – 1 (Band 1)		Sandwich – w/meal (egg and salad) – 1 (Band 1)	
Salad – main			Salad main – 1 (Band 1)			
Condiments	Condiment options / salt sachet availble on request.		Condiment options / salt sachet availble on request.		Condiment options / salt sachet availble on request.	
Desserts			Dessert – 1 (Band 2)		Dessert – 1 (Band 1)	
Nutrient dense snack		Nutrient dense snack - 2				
Other snacks		Other snack – 2		Other snack – 2		Other snack – 2

Note: The above is a sample template and not a prescribed model.

References [Will be relocated to References page]

1	The Five Food Groups [Internet]. eatforhealth.gov.au. 2015 [cited 11 March 2022]. Available from: https://www.eatforhealth.gov.au/food-essentials/five-food-groups
2	do Rosario V, Walton K. Hospital Food Service [Internet]. 2019 [cited 28 March 2022]. Available from: https://www.researchgate.net/publication/343494490_Hospital_Food_Service doi: 10.1007/978-3-319-75388-1_74-1.

Adult Inpatients | Special Considerations:

Special Considerations for people within an adult inpatient health facility.

The Nutrition Standards for adults are designed to be appropriate for most acute adult patients in hospital, guiding the design of an inpatient hospital menu which will meet the nutritional needs of most hospital inpatients. Inpatients in NSW Health facilities however are a heterogenous cohort of adults, some with unique nutritional needs or challenges which should be considered and planned for when designing a standard hospital menu. Doing this will achieve a patient centred menu design.

Some specific nutritional needs cannot be fully satisfied by the standard's inpatient menu. In these instances, the facility must offer the opportunity for the patient to be transitioned to a diet targeting their specific needs. These diets include therapeutic diets, operational diets or diets for religion / culture / lifestyle / life stage. The composition and design of these diets are guided by the ACI Diet Specifications .

The following patient groups should have their nutritional needs provided by the standard diet, but some special considerations are required during menu design.

Short stay patients

Short stay are patients are those who are in hospital for 3 or less days. They may include patient cohorts such as maternity patients, patients admitted for scheduled procedures or therapies, or in short stay medical assessment units.

It should not be assumed that short stay patients are not at nutritional risk. Some short stay patients may have history of frequent short stay readmissions due to the nature of their illness. Other short stay patients may have become at nutritional risk prior to their short stay admission. The completion of nutrition screening of these patients will guide in determining if these patients are at nutritional risk (1).

If nutritional screening indicates the need for a therapeutic diet, this should be ordered.

When determining the needs of the consumers of the health facility, it may be identified that some patient cohorts are consistently a short length of stay and are also most commonly screened as low nutritional risk (e.g., Maternity patients). Such cohort groups may be suitable for a shorter stay menu. The menu design standards may guide in strategies to manage this.

Our patients in NSW Health inpatient health facilities:
57 % of the episodes were for 1-3 days and the median age of the patient was 56 years old.

* Adults, excluding mental health in the 5 years 2015/16 to 2019/20.

Long stay and very long stay patients

Long stay patients are those who are in hospital for 7 days or more. They may include patient cohorts such as, but not limited to, rehabilitation, spinal injury, respiratory patients, cardiac patients, and transplant patients.

Very long stay patients are those who are in hospital for 4 weeks or more.

Malnutrition is more prevalent in patients with longer lengths of stay. (2,3,4,5) The completion of nutrition screening of these patients will guide in determining if these patients are at nutritional risk.

If nutritional screening indicates the need for a therapeutic diet, this should be ordered.

Menu fatigue is a common risk, for long stay, and in particular very long stay patients. Reduced intake is often a consequence which further impacts nutrition risk.

Patients require the opportunity of extended choice and provision of additional options when they have been an inpatient for an extended length of stay. The menu design standards may guide in strategies to manage this.

Our patients in NSW Health inpatient health facilities:*
19% of the episodes were for 8+ days and the median age of the patient was 73.5 years old.
If they remain admitted for more than 8 days, their average length of stay was 19.7 days.
If they remain admitted for more than 21 days, their average length of stay ranged from 35 – 64 days depending on their age group.

* Adults, excluding mental health in the 5 years 2015/16 to 2019/20.

Older persons

Older people can be in hospital for extended periods with complex medical problems and / or waiting for a place in rehabilitation or aged-care facilities. Older patients often don't eat enough or drink enough to meet their nutritional requirements. They have a higher prevalence of malnutrition, with the frequency increasing with increasing age. Aging is also associated with a decreased intake of energy and micronutrients, while the requirements for energy and protein increase. (2,3,4,5)

Menu design needs to incorporate strategies to support intake of preferred energy and protein dense options. These may include variations in serve sizes – including energy / protein fortification of small serves, varied presentation modalities (e.g., finger food and plated meals), and inclusion of familiar meal choices.

Our patients in NSW Health inpatient health facilities:*
47.3% of all episodes were for patients aged 65 years and over.
Average length of stay increased with age.
If an older person was admitted for 8+ days, their average length of stay ranged from 16.4 – 18.4 days.
If an older person was admitted for 21+ days, their average length of stay ranged from 35 – 41.2 days.

* Adults, excluding mental health in the 5 years 2015/16 to 2019/20.

Admissions related to Drug and Alcohol or eating disorders

Acute admissions for drug and alcohol or eating disorder presentations may require consideration of patient cohort behaviours in food service delivery and menu design.

The nutritional needs can be provided by the standard menu, but the service model used may require modification. These patient cohorts may require prescribed meal planning or titration of foods / nutrient provision or management of choice (E.g., use of a non-select menu model).

When determining the needs of the consumers of the health facility, it may be identified that these patient cohorts are commonly co-located, enabling a modified menu design to be used for the cohort.

Food service and Dietetic staff should collaborate in menu design planning to best meet the needs of these patient groups.

Patients requiring a therapeutic diet.

Therapeutic diets are those which have modified nutrient goals and specifications / controls around foods and fluids for the purpose of being used as part of medical therapy. They are available for use when the standard diet is not designed to meet the therapeutic goal of the diet.

Therapeutic diets are most appropriate for use for patients requiring:

- Allergy diets
- Nutrient modified diets
- Procedural or test diets
- Texture modified diets

Therapeutic diets must comply with the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets, they will be able to meet the nutrition goals and menu choice standards while others may be limited due to the nutrient composition or modifications in the diet.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Patients requiring a diet to meet their religion or culture / lifestyle / life stage choice: Diets for Religion or Culture

Some religions or cultural practices involve adherence to particular dietary restrictions or practices. It is important that a health facility is familiar with the religious and cultural requirements of their patient population, and that the food preferences are incorporated into the menu design. This may allow patient to meet their dietary restrictions from the standard menu.

There is also the opportunity to transition to a religious diet if additional food options / additional requirements or restrictions are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Maternity patients

Maternity patients often have a short length of stay and are often frequently admitted just prior to giving birth. This group of patients however have increased nutritional needs due to their life stage. These increased needs include additional energy (2.0-2.1MJ/ day additional), folate (up to 600µg), vitamin C (60-85mg), calcium (1000-1300mg) and iodine (220-270µg). (6) Lactating women need access to fluids to meet their increased fluid requirements.

The standard menu should be designed to allow these patients to meet their nutritional needs.

Food service delivery models may need consideration for these patients, adopting a model that allows for flexible meal timing and access to food. Food safety considerations are also a high consideration for this population and menu design should consider this. (7)

There is the opportunity to transition to a maternity diet if additional food options / additional requirements are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards. Similarly, if the patient is identified with a particular clinical need, e.g., gestational diabetes, hyperemesis gravidarum, an appropriate therapeutic diet may be indicated to better support their nutritional requirements.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Vegetarian and vegans

Vegetarian / plant-based diets are becoming preferred for personal, religious, cultural or sustainability reasons. Vegetarian diets can be nutritious but there are some additional considerations needed when planning a menu.

The standard menu will have available a range of plant based / vegetarian choices available to select from each day. This will include meat and dairy substitutes.

Nutrients at risk in this patient group include iron, zinc, calcium, omega 3 fats, vitamin B12 and vitamin D. (8) Options will be available on the menu to meet these requirements. To improve iron absorption, the menu should offer a good source of vitamin C at each meal, e.g., fruit juice or salad.

There is the opportunity to transition to a Vegetarian or Vegan diet if additional food options are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications.

Patients requiring an Operational Diet

Operational diets are those designed with modifications to the menu choices with the intent to support patient consumption. They are available for use when the standard diet is not meeting specific need of a patient.

Operational diets are most appropriate for use for patients requiring modified serving sizes, modified presentation (e.g., finger food) or modified texture for a non-therapeutic reason (e.g., cut up).

Operational diets must comply with the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets some will be able to meet the nutrition goals and menu choice standards while others may be limited due to the composition or modifications in the diet.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

References: [Will be relocated to References page]

1	NSW Health Policy - Nutrition Care PD2017_041 [Internet]. NSW Health Policy. 2017 [cited 21 March 2022]. Available from: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_041.pdf
2	do Rosario V, Walton K. Hospital Food Service [Internet]. 2019 [cited 28 March 2022]. Available from: https://www.researchgate.net/publication/343494490_Hospital_Food_Service doi: 10.1007/978-3-319-75388-1_74-1.
3	Barker L, Gout B, Crowe T. Hospital Malnutrition: Prevalence, Identification and Impact on Patients and the Healthcare System. International Journal of Environmental Research and Public Health. 2011;8(2):514-527.
4	Australian Commission on Safety and Quality in Health Care. Hospital Acquired Complication - Malnutrition. Australian Commission on Safety and Quality in Health Care; 2018 p. 1-10. Available at: https://www.safetyandquality.gov.au/sites/default/files/migrated/SAQ7730_HAC_Malnutrition_LongV2.pdf
5	Walton K. Treating malnutrition in hospitals: Dietitians in the driving seat? Nutrition & Dietetics. 2009;66(4):202-205.
6	Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes, 2006, Upd 2017, NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/about-us/publications/nutrient-reference-values-australia-and-new-zealand-including-recommended-dietary-intakes
7	Diet and nutrition health advice - Pregnancy and breastfeeding [Internet]. Dietitians Australia. 2022 [cited 23 August 2022]. Available from: https://dietitiansaustralia.org.au/health-advice/pregnancy-and-breastfeeding
8	Diet and nutrition health advice – What is a vegetarian diet? [Internet]. Dietitians Australia. 2022 [cited 23 August 2022]. Available from: https://dietitiansaustralia.org.au/health-advice/vegetarian-diet

Adult Inpatients | Our Patients:

When planning a menu for your health facility, it must involve engagement with key stakeholders, and consider the demographics of your health facility population, their length of stay and the religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting. This will help inform decisions about the menu that is suitable for your facility.

When data was assessed for NSW Health facilities, over the 5 years 2015/16 to 2019/20, the following key findings were identified:

Key Facts - Adult Inpatients: [For display as infographics]

- Average length of stay (LOS) – for all ages is 6 days. Median LOS – for all ages is 3 days.
- 2 in 5 admissions are admitted for more than 3 days.
- 1 in 5 admissions are more than 7 days.
- Almost 1 in 2 admissions are 65 years old and older.
- More than 1 in 10 are 85 years old and older.
- LOS increases with patient's age.

Age Groupings of Admitted Inpatients

Age Group (years)	Median Age (years)	Median LOS (days)	Average LOS (days)	% of Episodes
19-<65	41.5	2	5.2	52.7%
65-<75	70.2	3	6.4	16.5%
75-<85	80.0	4	6.9	17.4%
85+	89.2	5	7.3	13.4%
All ages	63.1	3	6.0	

Length of Stay in Hospital

Length of Stay – all admissions

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-7 days	2.7	2	59.6	81.0%
8+ days	19.7	13	73.5	19.0%
All days	6.0	3	63.1	

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-3 days	1.7	2	56.0	57.0%

4-7 days	5.2	5	67.4	24.0%
8+ days	19.7	13	73.5	19.0%
All days	6.0	3	63.1	

Length of Stay – Aged Grouped

LOS Group	Age Group (years)			
	19-<65	65-<75	75-<85	85+
	Average LOS (days)			
1-3 days	1.7	1.7	1.8	1.8
4-7 days	5.0	5.2	5.3	5.3
8-14 days	10.2	10.3	10.3	10.4
15-21 days	17.5	17.5	17.5	17.6
21+ days	64.0	41.2	37.0	35.0
All LOS	5.2	6.4	6.9	7.3

LOS Group	Age Group (years)			
	19-<65	65-<75	75-<85	85+
	Average LOS (days)			
1-7 days	2.5	2.9	3.1	3.3
8+ days	24.6	18.4	17.1	16.4
All LOS	5.2	6.4	6.9	7.3

Data Source Information:

Data source:

NSW Admitted Patient Data Collection (APDC) extracted from Hospital Performance Dataset (HoPeD) accessed via Secure Analytics for Population Health Research and Intelligence (SAPHaRI).

Data Scope:

Data collection period is 5 years: FY 2015/16 to 2019/20

Data includes all overnight hospital admissions from NSW public hospitals.

Total included episodes: 867 862

Exclusions include:

- Same day admissions (admission and discharge dates are the same)
- Renal dialysis admission (regardless of length of stay)
- Newborn admissions
- Admissions from facilities other than hospitals (e.g., age care)
- Hospital in the home admissions

Definitions:

- Adult Services: 19+ yo

- Other care: Includes “Hospital Boarder” and “Other Admitted Patient Care”. As defined in the admission data dictionary. “The principal clinical intent does not meet the criteria for any other category”.

Disclaimer:

- Content within this publication was accurate at the time of publication.
-
- The data is representative of the whole state and that it is important in menu design that the population data for the individual facility is considered.

Paediatric Inpatients | Nutrient Goals:

Key changes to this section include:

- Design the Nutrient Standards so they can be used as a compliance criterion for auditing
- Commentary around incorporating higher salt food choices
- Vitamin B12 guidance statement
- Details relating to serve size and texture requirements included in *Developmental and behavioural considerations for food provision table.*

No changes made to

- Upper limit for sodium

Nutrient Goals – Paediatrics.

Nutrient goals guide the amount of a nutrient which needs to be consumed to avoid the health risks of deficiency, or over consumption. They are evidence informed and form the basis of nutrition recommendations.

In menu planning, for inpatients it is important that the standard hospital menu **provides opportunity** to meet the nutrient goals from a range of meal items chosen from the menu (assuming it was eaten.) Providing this range of food choices reduces the risk of inpatients developing malnutrition during their admission and supports patients to make healthy choices for chronic disease management

Nutrient goals are nutrient reference values guided by the 2017 Nutrient Reference Values for Australia and New Zealand (1). for different age groups. As each age and gender group has different needs for growth and development, the goals were divided into five groups: infants; children 1–3 years; children 4–8 years; children 9–13 years and children 14–18 years.

For nutrient goals where there are gender differences in an age group, the upper reference value appropriate for the age group has been adopted to ensure the nutrient needs of all children and adolescents in the age group are met. These values provide a high level of assurance that most children admitted to NSW Health hospitals will be provided with adequate food and nutrition to meet their needs from the standard menu.

The standard hospital menu should be capable of meeting nutrient targets for:

- daily energy
- daily protein
- micronutrients (vitamins and minerals) and other macro nutrients averaged over a week

Nutrient goal standards are recommended actions that are required to be achieved to design a menu with capability of meeting the nutrient goals. They allow for the ability to benchmark the suitability of hospital menus from a nutritional perspective. This is achieved by assessing compliance to the nutrient goal standards.

Rationale / commentary provides explanations of any variation or considerations in defining the nutrient goal targets. They also outline key considerations used to develop nutrient goal standards for the nutrient.

When developing the nutrient goals, nutrient goals were not listed for all nutrients outlined in the Nutrient Reference Values for Australia and New Zealand. Nutrients likely to be important to hospitalised patients were prioritised. An assumption is made that if menus are designed to meet specified nutrient goals, it is likely the requirements for other essential nutrients (e.g., thiamin, vitamin A, magnesium or potassium) will also be met.

Application Tip:
When assessing a menu against the Nutrient Goals, the objective is that the menu complies to the criteria outlined in the Nutrient Goals and Nutrient Goal Standards columns.

Paediatric considerations

Healthcare facilities should provide age-appropriate food and texture that is appropriate to the various stages of growth and development.

Paediatric menus are designed to meet needs according to both age and developmental stage. Although grouped by age, there may be individual variation amongst children in reaching developmental and behavioural milestones. Thus, the choice of diet / menu should be based on the developmental needs of the patient in priority to the age grouping. For example, a 4-year-old may require a variation in texture that will be best provided from the 1-3y year old diet.

Paediatric inpatients may experience regression in developmental feeding skills while unwell and diet provision needs to meet their capacity to optimise intake during recovery.

The following table provides a guide to the stages of development relevant to food provision. Further details are included in the ACI Paediatric Diet Specifications – Paediatric age-appropriate diets.

Age	Developmental and behavioural considerations for food provision
Infants 0–6 months	• Breastmilk or an age-appropriate infant formula is the main source of nutrition. Breastfeeding offers immediate and long-term health outcomes for mother and infant and is to be actively promoted, protected, and supported by the NSW Health system. (2-6) • Breastfeeding can continue for up to two years of age and beyond. (2-6) • Introduction of first foods / solids can commence at around six months, but not before four months (6,7) • Solids are introduced as single-ingredient, pureed food items. • Small serve sizes will be available for this age group. *
Infants 7–12 months	• Breastmilk or an age-appropriate infant formula is the main source of nutrition. Breastfeeding can continue for up to two years of age and beyond. (2-6) • Solids will contribute to their nutritional intake. Food choices should be suitable for the child's age and stage of development. • Mixed textures are required for this age group with food texture progressing from puree, mashed, and cut up, to finger food. Many infants will commonly eat a variety of these textures. • As food texture progresses, the frequency of solid meals/snacks being consumed across the day increases. It is expected that by age 12 months, 3 meals +/- 2 snacks are being consumed in a day. • Small serve sizes will be available for this age group. *

1–3 years	• Breastfeeding can continue for up to two years of age and beyond. (2-6) • Solids will be the largest contribution to their nutritional intake. Textures have progressed to full / standard textures, or textures with small modifications (E.g., chopped). Finger foods are also required as they are important in the development of eating skills. • A broad range of foods and snacks contribute significantly to nutrient intake because of the wide variation in the amount of food eaten at different mealtimes. • Small serve sizes will be available for this age group. *
4–8 years	• This age group relies on a broad range of foods and snacks to meet their nutrient requirements. • This age group does not require modification to texture. • Serve sizes may be a combination of small or standard serves for this age group. *
9–13 years	• This age group relies on a broad range of foods and snacks to meet their nutrient requirements. • This age group does not require modification to texture. • Standard serve sizes will be offered for this age group. Growth spurts result in increased nutritional demands, sometimes requiring access to larger serves.
14–18 years	• This age group relies on a broad range of foods and snacks to meet their nutrient requirements. • This age group does not require modification to texture. • Standard serve sizes will be offered for this age group, but larger serve sizes* will be available for adolescents. • Growth spurts result in increased nutritional demands, often increasing appetite.

* Operational considerations are required. Small or large serve sizes may not be possible for all food items. E.g., pre-packaged items.

Macronutrients

Energy

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Infants 0-6 months			• Breastmilk[≠] or an age-appropriate infant formula is the major contributor of energy to the diet.
Infants 7-12 months	3500kJ	For all ages 7 months and older: • The menu provides opportunity to choose a range of food and fluids of appropriate energy content and textures to achieve the nutrient goal for energy for each age group.[†] For ages 7-12 months: • It is expected that 1700kJ will be achieved from (600ml/day) breastmilk or infant formula. Remaining 1800kJ to be provided by food.	• Energy goal is based on 12-month-old male infant. (1) • Breastmilk[≠] or an age-appropriate infant formula remains the dominant source of nutrition for children in this age group, as their eating skills develop.
Children 1-3 years	4200kJ	For all ages 1 year old and older: • Access to small serves is available – especially for the 1–8-year-old age group. • Access to large serves or extra serves is available – especially for the 14 – 18-year-old age group. • Access to energy fortified / nutrient dense options are available for those with smaller appetites. • A high energy mid-meal snack, with at least 500kJ per serve is offered at each mid meal. • A lower energy mid-meal snack, with not more than 400kJ per serve is offered at each mid meal.	• Energy goal is based on the Estimated Energy Requirement for the oldest male child in each age group with a PAL of 1.2 (bed rest) and no disease factor. (1,8). This will meet the requirements of most children in each age group. • Breastfeeding can continue for up to two years of age and beyond providing a source of energy. (2-6) • Insufficient energy intake is a common cause of poor nutritional status. Low energy intake reduces the effectiveness of treatment and further delays recovery. (2,3)
Children 4-8 years	5500kJ		
Children 9-13 years	7500kJ		
Adolescents 14-18 years	9400kJ		

[≠] Breastfeeding can continue for up to two years of age and beyond. (2-6)

[†] This is determined following an assessment of a minimum 1 weeks' worth of test menus, calculation of the provision of the target nutrient and comparison against the nutrient goal. The nutrient goal for energy and protein must be achievable daily, and the nutrient goal for other nutrients can be achieved on average on a weekly basis.

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
			• In early childhood (up to five years), it is common for children to have varying appetites and growth rates. • Small, frequent, energy-dense meals and snacks from the different food groups are important for meeting energy requirements. (6) • Older children may have higher appetites and rely on large serves and high-energy snacks to help satisfy appetite and higher energy requirements (e.g., boys, 14-18 years).

Protein

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Infants 0-6 months	10g/ day (1.43g/kg)		For infants 0-12 months olds: • Protein goal is based on the adequate intake (AI) for all genders. (1,9) • Breastmilk or an age-appropriate infant formula is the major contributor of protein to the diet (for 0–6-month-olds). • Breastfeeding can continue for up to two years of age and beyond, providing a source of protein. (2-6) • Australasian Society of Clinical Immunology and Allergy (ASCIA) Guidelines recommend that the introduction of foods containing protein can start at around six months, but not before four months (6,7).
Infants 7-12 months	14g / day (1.60g/kg)	For all ages: • The menu provides opportunity to choose a range of food and fluids of appropriate protein content and textures to achieve the nutrient goal for protein for each age group†. • High quality protein options are available at each mealtime. This includes a variety of meat, poultry, fish, legumes, milk, eggs, cheese, yoghurt, and custard. • Fish options are bone free to avoid choking risk. • Fish options comply to mercury content recommendations outlined in the Food Standards ANZ,	
Children 1-3 years	14g/day (1.08g/kg)		For all ages 1 year old and older: • Protein goal is based on the recommended daily intake (RDI) for all genders in defined age groups. (1,9)
Children 4-8 years	20g/day (0.91g/kg)		
Children 9-13 years	40g/day (0.94g/kg)		

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Adolescents 14-18 years	65g/day (0.99g/kg)	Mercury in Fish Advisory Statement (10). For all ages 1 year old and older: • A protein source, with at least 5g protein per portion, is offered at breakfast. • Access to protein fortified / nutrient dense options are available for those with smaller appetites or increased needs • Access to small protein serves is available – especially for the 1–8-year-old age group. • Access to large protein serves or extra serves is available – especially for the 14 – 18-year-old age group • A high protein mid-meal snack, with at least 3.0g protein per serve is offered once a day, and available to access at other times for those who require additional protein. (This may be a combined high protein / high energy snack.)	

Fat - Saturated Fat and Trans Fat

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Infants 0-6 months	-		• Breastmilk≠ or an age-appropriate infant formula is the major contributor of fat to the diet.
Infants 7-12 months	-	• Full fat products are included on the menu.	• Restriction of dietary fat is not recommended during the first two years of life because it may compromise the intake of energy and essential fatty acids and adversely affect growth, development, and the myelination of the central nervous system. (5,6)
Children 1-3 years			

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Children 4-8 years	Ideally, not more than 10%of energy should be from trans and saturated fat, with an upper limit of 13%.	• Low fat / reduced fat products are included on the menu as an option in addition to full fat options. • A choice of mono-unsaturated or poly-unsaturated spreads are offered at each meal. • Hot mains are cooked with unsaturated fat, where appropriate. • Vegetables dishes are cooked with unsaturated fat, where appropriate. • Potato, rice and pasta dishes have less than 2g saturated fat per standard serve. • Desserts are prepared with unsaturated fat where appropriate. • Sandwiches are to be prepared with mono-unsaturated or poly-unsaturated margarine. • Fish is offered at least two - three times per week (in main meals, salads, or sandwiches). Oily fish such as tuna, salmon, mullet, or sardines should be preferred. • Fish options are bone free to avoid choking risk. • Fish options comply to mercury content recommendations outlined in the Food Standards Mercury in Fish Advisory Statement (10).	• The menu should allow patients to select lower saturated fat options. • Food preparation must incorporate the use of lower saturated fat ingredients.
Children 9-13 years		•	•
Adolescents 14-18 years		•	•

Carbohydrate

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Infants 0-6 months	-		• Breastmilk≠ or an age-appropriate infant formula is the major contributor of carbohydrate for infants. • Appropriately textured solids can supplement an infant's intake. • Added or refined sugars should be avoided for <2-year-olds.
Infants 7-12 months		• All breakfast cereals contain less than 30g sugars/100g • All canned fruit is in natural fruit juice or water, and not syrup. • All fruit juice is to be 100% juice with no added sugar. • Beverages with added sugar and negligible nutritional value (e.g., cordial, and soft drinks) should not be offered – for all ages.	
Children 1-3 years			
Children 4-8 years			
Children 9-13 years			
Adolescents 14-18 years			

Fibre

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Infants 0-6 months			• No adequate intake (AI) has been defined for these age groups (1)
Infants 7-12 months			
Children 1-3 years	14g/day	• The menu provides opportunity to choose a range of foods of appropriate fibre composition to achieve the nutrient goal for fibre for each age group†. • At least 50% of cold breakfast cereals provide at least 3g fibre per serve. • Whole meal /multi grain bread is offered at all meals as an alternative to white bread. • Sandwiches made with whole meal /multi grain bread are offered. • Fruit (fresh, canned) is offered at each main meal and is available as a midmeal option. • Vegetables are offered at a minimum of 2 main meals per day.	• Fibre goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Consuming adequate fibre may prevent and assist with managing constipation. • The action of fibre in preventing constipation depends on an adequate fluid intake.
Children 4-8 years	18g/day		
Children 9-13 years	24g/day		
Adolescents 14-18 years	28g/day		

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		• A main salad is offered as an alternative to a hot main or sandwich.	

Fluid

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Infants 0-6 months	0.7 L/day (From breast milk or formula)		• Fluid goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Infants 7-12 months receive most of their fluid requirements from breastmilk≠ or infant formula. • Water can be given in addition.
Infants 7-12 months	0.8 L/day (From breast milk, formula, food, plain water and other beverages, including 0.6 L as fluids)		
Children 1-3 years	1.0L/day	• Water is available at the ward level, or at the bedside of all patients for whom it is developmentally and clinically suitable. • A selection of beverages is offered at all meals and mid-meals. • Cow's milk, plain or flavoured, is offered at every meal, and midmeal. • Soy milk, if offered is fortified with calcium 100mg/100mL. • Milk alternatives, such as rice or oat drinks, if offered are not offered as a substitute for milk. (Not nutritionally comparable) • For children aged 1-8 years, juice is limited to no more than once per day. • For children aged 9+ years, juice is limited to no more than twice per day. • Tea and coffee are not offered. • Cordial / soft drinks are not offered. They can be	For all ages 1 year old and older: • The menu, and food service model, must provide opportunity to access and choose a range of fluids to achieve the nutrient goal for fluid for each age group. • Fluid includes water, milk and other drinks.
Children 4-8 years	1.2L/day		
Children 9-13 years	1.6L/day		
Adolescents 14-18 years	1.9L/day		

Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		available to access if clinically indicated.	

Micronutrient Goals

Nutrient/ Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Sodium			
Infants 0-6 months	120mg/day	For all age groups: • The menu provides opportunity to choose a range of sodium containing food sources in a day without exceeding the upper limit nutrient goal for sodium for each age group†. For infants aged 0-12 months-: • All infant meat / poultry / fish options are cooked without added salt / sources of added sodium. • Access to small serves is available. • Vegetables are cooked without added salt. • Multi ingredient potato, rice and pasta dishes are cooked without added salt / sources of added sodium. • Single ingredient potato, rice and pasta dishes are cooked without added salt. • Bread has sodium levels of less than 400mg/100g. • Salt sachets are not offered on infant menus. • Default menus are designed to provide not more than the AI for sodium per day for each age group. •	• Sodium goal is based on the adequate intake (AI) for all genders in defined age groups. (1) No upper limit (UL) is defined for these age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the main source of sodium for infants. • Appropriately textured solids can supplement an infant's intake.
Infants 7-12 months	170mg/day		
Children 1-3 years	1000mg/day (UL)	For all ages 1 year old and older:	• Sodium goal is based on the upper limit (UL) for all genders in defined age groups. (1)
Children 4-8 years	1400mg/day (UL)		
Children 9-13 years	2000mg/day (UL)		

Nutrient/ Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Adolescents 14-18 years	2300mg/day (UL)	• Access to small serves is available for the 1 – 8-year-old age groups. • Not more than 10% of hot main menu items to have more than 575mg sodium per serve over the menu cycle. (Core main menu only, does not include background menu choices). • High sodium choices included on the menu have an additional high quality nutritional benefit. E.g., also high protein • Vegetables are cooked without added salt. • Multi ingredient potato, rice and pasta dishes have sodium levels of less than 300mg per serve. • Single ingredient potato, rice and pasta dishes are cooked without added salt. • Bread has sodium levels of less than 400mg/100g. • Default menus are designed to provide not more than the AI for sodium per day for each age group. • Salt sachets are not offered. • Not more than 10% of the range of midmeal and snack options to have more than 300mg sodium per serve.	• The menu should not be designed to be low in sodium but should not be high in sodium. • Inclusion of higher salted foods (such as cheese and ham) or meals, which are nutritionally dense and well accepted by patients who are unwell or eating poorly, is acceptable. • Menu planning must consider when higher sodium choices are offered that there are also lower sodium options within that menu group to moderate sodium provided. Similarly, the same consideration applies for side dishes. If a high sodium main dish is offered, lower sodium sides should be offered at that meal. • When a default menu is provided, it should be designed to not exceed the daily sodium upper limit. • Sodium intake reduction is a key public health goal. (1,11,12)
Vitamin C			
Infants 0-6 months	25mg/day	For all age groups: • The menu provides opportunity to choose a range of Vitamin C food or fluid sources to achieve the nutrient goal for Vitamin C for each age group†. For infants 4+ months:	• Vitamin C goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the major contributor of Vitamin C to the diet.
Infants 7-12 months	30mg/day		

Nutrient/ Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		• Cereal based foods for infants are compliant with the Food Standard - Food for infants (13) in relation to Vitamin C content.	
Children 1-3 years	35mg/day	• Uncooked sources of vitamin C, of appropriate texture for the developmental aged diets, are offered at each main meal and midmeal. These include fresh fruit, raw vegetables, juices, or salads. • Juices contain at least 20mg Vitamin C per 100ml.	• Vitamin C goal is based on the recommended daily intake (RDI) for all genders in defined age groups. (1) • Vitamin C is a significant vitamin with respect to wound healing and infection resistance. (14) • There are large losses of vitamin C in food service handling, processing and cooking. (15,16) • Uncooked sources of vitamin C must be available to reduce the risk of deficiency. • Fruit juice is a practical and easily consumable source of vitamin C for population who may have reduced appetite and intake tolerance, and therefore may be less likely to consume raw fruits and vegetables when unwell.
Children 4-8 years	35mg/day		
Children 9-13 years	40mg/day		
Adolescents 14-18 years	40mg/day		
Folate			
Infants 0-6 months	65µg/day		• Folate goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the main source of folate for infants. • Appropriately textured solids can supplement an infant's intake.
Infants 7-12 months	80µg/day	• The menu provides opportunity to choose a range of appropriately textured solids such as fruit, vegetables and rice cereal to contribute to folate intake.	
Children 1-3 years	150µg/day	• The menu provides opportunity to choose a range of folate containing food	• Folate goal is based on the recommended daily intake (RDI) for all genders in defined age groups. (1)
Children 4-8 years	200µg/day		
Children 9-13 years	300µg/day		

Nutrient/ Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Adolescents 14-18 years	400µg/day	sources to achieve the nutrient goal for folate for each age group†. • Folate fortified breakfast cereals are offered. • A choice of vegetable items is offered to allow for selection of 5 serves of vegetables per day. • A choice of fruit items is offered to allow for selection of 2 serves of fruit per day.	• There are large losses of folate in cooking and processing. (17)
Calcium			
Infants 0-6 months	210mg/day		• Calcium goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the main source of calcium for infants. • Appropriately textured solids can supplement an infant's intake.
Infants 7-12 months	270mg/day	• The menu provides opportunity to choose a range of appropriately textured dairy-based desserts such as yoghurt and custard to contribute to calcium intake.	
Children 1-3 years	500mg/day	• The menu provides opportunity to choose a range of calcium containing food sources to achieve the nutrient goal for calcium for each age group†. • Dairy products are offered at every main meal and mid meal. • Soy milk or non-dairy milk alternatives are available and contain at least 100mg calcium per 100ml. • Low fat/ reduced-fat dairy products are not offered for	• Calcium goal is based on the recommended daily intake (RDI) for all genders in defined age groups. (1) • Calcium requirements are largely determined by skeletal needs, which increase during periods of rapid growth (such as childhood and adolescence). • Calcium intake in childhood and adolescence is crucial in attaining peak bone mass and the prevention of osteoporosis in later life. (3,4,5)
Children 4-8 years	700mg/day		
Children 9-13 years	1300mg/day		
Adolescents 14-18 years	1300mg/day		

Nutrient/ Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		children less than two years of age.	• Dairy products are the commonly preferred food source of calcium however alternative (non dairy) calcium options must be available to meet patient preferences.
Iron			
Infants 0-6 months	0.2mg/day		• Iron goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the main source of iron for infants.
Infants 7-12 months	11mg/day	• The menu provides opportunity to choose a range of iron containing food sources to achieve the nutrient goal for iron for each age group†. • Iron-fortified breakfast cereals are offered daily. • Cereal based foods for infants are compliant with the Food Standards Code- Food for infants (13) in relation iron content. • Red meat is offered in at least one main dish / sandwich / main salad per day. • For infants, have access to meat and vegetable dishes which have been fortified with iron. • Wholemeal breads, eggs, legumes, and white meats are offered on the menu to broaden the variety of iron sources. • A vitamin C source is offered at the same meal (to promote iron absorption)	• Iron goal is based on the recommended daily intake (RDI) for all genders in defined age groups. (1) • For infants aged 7-12 months, solids are the main source of iron in their diet. • Iron requirements for adolescent boys increase during the growth spurt as new muscle is laid down. • Adolescent girls are at particular risk of developing iron deficiency due to effects of continuing growth, menstrual iron losses, and a low intake of dietary iron. (18)
Children 1-3 years	9mg/day		
Children 4-8 years	10mg/day		
Children 9-13 years	8mg/day		
Adolescents 14-18 years	15mg/day		
Zinc			
Infants 0-6 months	2.0mg/day		• Zinc goal is based on the adequate intake (AI) for all

Nutrient/ Age Range	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
			genders in defined age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the main source of zinc for infants.
Infants 7-12 months	3.0mg/day	• The menu provides opportunity to choose a range of zinc containing food sources to achieve the nutrient goal for zinc for each age group†. • Meats, fish, and poultry offered daily on the menu. • Cereals and dairy foods are offered daily on the menu.	• Zinc goal is based on the recommended daily intake (RDI) for all genders in the defined age group. (1) • Ensuring adequate intakes of energy, protein and iron will provide opportunities for meeting the zinc requirement. • Zinc is especially important during adolescence because of its role in growth and sexual maturation. (19)
Children 1-3 years	3.0mg/day		
Children 4-8 years	4.0mg/day		
Children 9-13 years	6.0mg/day		
Adolescents 14-18 years	13.0mg/day		
Vitamin B12			
Infants 0-6 months	0.4µg/day		• Vitamin B12 goal is based on the adequate intake (AI) for all genders in defined age groups. (1) • Breastmilk≠ or an age-appropriate infant formula is the main source of Vitamin B12 for infants.
Infants 7-12 months	0.5µg/day	• Dairy products should be offered at every main meal and mid meal. • Meats, fish, and poultry offered daily on the menu.	
Children 1-3 years	0.9µg/day		• Vitamin B12 goal is based on the recommended daily intake (RDI) for all genders in the defined age group. (1) • Analysis limitations impact the ability to assess actual intake of Vitamin B12. • Reporting of Vitamin B12 intake is therefore not required when assessing against the standards. • Ensuring adequate intakes of energy, protein and calcium will provide opportunities for meeting the Vitamin B12 requirement. (1)
Children 4-8 years	1.2µg/day		
Children 9-13 years	1.8µg/day		
Adolescents 14-18 years	2.4µg/day		

References [Will be relocated to References page]

1	Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes, 2006, Upd 2017, NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/about-us/publications/nutrient-reference-values-australia-and-new-zealand-including-recommended-dietary-intakes
2	National Health and Medical Research Council. EAT FOR HEALTH Infant Feeding Guidelines Information for health workers [Internet]. 2012. Available from: http://file:///C:/Users/22600575/Downloads/Infant-feeding-guidelines-info-for-health-workers.pdf
3	Australian National Breastfeeding Strategy collection [Internet]. Australian Government Department of Health and Aged Care. 2022 [cited 15 August 2022]. Available from: https://www.health.gov.au/resources/collections/australian-national-breastfeeding-strategy-collection#:~:text=Australia's%20infant%20feeding%20guidelines%20recommend,both%20mother%20and%20infant%20wish
4	NSW Ministry of Health. Breastfeeding your baby [Internet]. Sydney; 2016. Available from: https://www.health.nsw.gov.au/kidsfamilies/MCFhealth/Publications/breastfeeding-your-baby.pdf
5	NSW Health. Breastfeeding in NSW - Promotion, Protection and Support (PD2018_034) [Internet]. 2018. Available from: http://file:///C:/Users/22600575/OneDrive%20-%20NSW%20Health%20Department/Desktop/PD2018_034.pdf
6	Infant and young child feeding [Internet]. Who.int. 2021 [cited 15 August 2022]. Available from: https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding
7	ASCIA. Infant Feeding and Allergy Prevention [Internet]. 2020. Available from: https://www.allergy.org.au/images/pcc/ASCIA_Guidelines_Infant_Feeding_and_Allergy_Prevention_2020.pdf
8	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Dietary Energy**. https://www.nrv.gov.au/dietary-energy
9	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Protein**. https://www.nrv.gov.au/nutrients/protein
10	Food Standards Australia and New Zealand. Mercury in Fish Advisory Statement [Internet]. 2020. Available from: https://www.foodstandards.gov.au/consumer/chemicals/mercury/Pages/default.aspx
11	Australian and New Zealand Nutrient Reference Values for Sodium. A report prepared for the Australian Government Department of Health and the New Zealand Ministry of Health, 2017 https://www.nrv.gov.au/sites/default/files/content/resources/2017%20ANZ%20NRVs%20for%20Sodium%20%28containing%20recommendations%29.pdf
12	Eat for Health - Australian Dietary Guidelines. Providing the scientific evidence for healthier Australian diets, 2013.NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/adg
13	Food Standards Australia and New Zealand. Food for Infants - Food Standard 2.9.2 [Internet]. 2016. Available from: https://www.foodstandards.gov.au/code/Documents/2.9.2%20Food%20for%20infants%20v157.pdf
14	Nutrition Care Manual [Internet]. Nutritioncaremanual.org. 2022 [cited 15 August 2022]. Available from: https://www.nutritioncaremanual.org/
15	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Vitamin C**. https://www.nrv.gov.au/nutrients/vitamin-c
16	Vitamin C factsheet for health professionals – March 2021, National Institute of Health, Office of Dietary Supplements, US. [Internet]. Ods.od.nih.gov. 2022 [cited 15 August 2022]. Available from: https://ods.od.nih.gov/factsheets/VitaminC-HealthProfessional/
17	McKillop D, Pentieva K, Daly D, McPartlin J, Hughes J, Strain J et al. The effect of different cooking methods on folate retention in various foods that are amongst the major contributors to folate intake in the UK diet. British Journal of Nutrition. 2002;88(6):681-688.

18	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Iron**. https://www.nrv.gov.au/nutrients/iron
19	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Zinc**. https://www.nrv.gov.au/nutrients/zinc

Paediatric Inpatients | Menu Choices:

Key changes to this section include:

- Design the menu choice standards so they can be used as compliance criteria for auditing
- Include more guidance around menu design
- Portion sizes modified to meet the needs of paediatric patients
- Age groups have been revised
- Managing the needs of long stay patients

Menu Choice – Offering variety and opportunity.

"To meet the nutrient requirements essential for good health, you need to eat a variety from each of the five food groups daily, in the recommended amounts. It is not necessary to eat from each food group at every meal. In fact, in some instances, you only need to eat some of the foods in each food group a couple of times a week. "(1) "It is also important to enjoy a variety of foods within each of the Five Food Groups because different foods vary in the amount of the key nutrients that they provide. "(1)

https://www.eatforhealth.gov.au/food-essentials/five-food-groups

Choice is a key factor affecting food intake and satisfaction. (2) Providing guidance around the minimum frequency in which food groups should be offered, and guidance around the range of variety, improves the consumers range of choice, and can help prevent menu fatigue. It also helps to ensure patients are provided with a range of foods consistent with the core food group recommendations, (1) promotes consistency of service provision across the State, and equity of access.

Menu choice standards are comprised of three components:

- Minimum choices
- Minimum standard serve
- Menu design standards (global standards, and also menu item targeted standards)

Minimum choices outline quantified targets which provide the ability to benchmark the suitability of a hospital menu from a variety and choice perspective. Facilities are encouraged to extend the meal service and offer additional choices. The actual number of main meals and menu patterns are not specified, to allow flexibility in service delivery models, menu planning and implementation.

Minimum standard serves provide a guide around serving sizes for menu items. These take into consideration food industry norms which influence the packaging size of portion-controlled products, and the minimum serve size acceptable to the patient.

Menu design standards are recommended actions that will guide the development of a menu which has good variety within meals and across the menu cycle.

Collectively, menu choice standards guide the provision of maximum opportunity for patients/consumers /residents to choose at least the minimum number of serves from each of the core food groups, at mealtimes they prefer, from a menu which is consistent with the overarching principles of the standards.

Application Tip:

When assessing a menu against the Menu Choice, the objective is that the menu complies to the criteria outlined in the Minimum Choices, Minimum Standard Serve and the Menu Design Standards columns.

Menu Choice Standards

Designing a menu to promote variety and opportunity for choice.

Menu Design Standards

These menu design standards support the design of a menu which prioritises the needs and preferences of the consumer.

Menu Planning and Design:

- The menu offers the opportunity for the consumer to access, at a minimum, three main meals and two to three midmeals each day. This can be provided using varied food service delivery models.
- The menu demonstrates menu design qualities such as variation in ingredients, preparation styles, flavours, textures, cultural representations, and that repetition is considered and limited to avoid repetition of items at consecutive meals or on consecutive days. The exception to this may be if the menu is a static style menu, or if the items are popular and preferred items.
- The menu demonstrates variety across all menu components – including hot mains, sandwiches, salads and desserts.
- The menu design demonstrates consideration of religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting.
- The menu design demonstrates cultural diversity, not just in the selection of main meal items, but also condiments and meal accompaniments.
- The menu design offers minimally processed foods at each meal and snack, and offers a fresh food choice at each mealtime.
- The menu design considers food preferences of young children – such as simply prepared, mild-tasting foods that they can easily identify and consume.
- The menu design and food selection consider potential paediatric safety risks, especially the risk of choking. Food options on the menu should not be tough or stringy, have skin, gristle or bones, and that the served product is of an appropriate texture and consumption size for the age group. (E.g., the size, hardness and shape of some foods make them more likely to be inhaled and cause choking in children under 3 years.)
- The menu design incorporates the needs for varied portion sizes for different age groups.
- The menu design of default selections of a standard diet for the different age groups meets the nutrient goal standards but not necessarilly all menu choice standards.

Length of Stay Considerations:

For long length of stay admissions:

- A facility has in place mechanisms to identify their their very long length of stay admissions. (Admitted for 4 weeks or more)
- The menu design includes strategies to offer additional variety for consumers who are admitted for more than 4 weeks. This variety is not just limited to main meal choices, but other meal components also.

For short length of stay admissions:

- Where a facility is interested in a shorter stay menu – for particular services such as short stay units, it may be viable to have a cohort menu with alternative design (shorter cycle of reduced choice). This could be managed as an operational menu / therapeutic type menu which sits outside of the

standards. If this strategy is adopted, the facility must provide rationale for the short stay menu, such as the average length of stay for the chosen cohort being 3 days or less and have processes in place to ensure high nutritional risk and longer stay patients are provided with additional options.

Menu Review:

- A framework exists which outlines how often the menu will be reviewed, with a menu review activity conducted at least every 2 years. A menu review activity may include occassional component review, or interchange of items (for example, based on seasonal availability) or a scheduled full menu review.
- A menu review must demonstrate consideration of the consumer needs and preferences of the consumers of the health facility. This includes the religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting.
- A menu review must demonstrate engagement and input from key stakeholders including, but not limited to, food service representatives, clinical dietitian representatives, and consumers and residents, or their carers, of the health facility.
- An assessment of the compliance of the menu to the nutrition standards should be completed every 2 years to assist in informing considerations for the menu review.

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
Fruit *Fresh or canned*			
<1 year-old	• 1 option at each main meal • 1 option at each mid meal	150g fresh fruit (1 medium piece, 2 small pieces or 5 prunes) or 120g canned fruit	• A variety of fruit is offered including full pieces, canned options and cut up options. • Texture modification must be appropriate for the age category***.
1-8- year-old			
9-18- year-old			
Juice			
<1 year-old	• Not to be offered		
1-8- year-old	• 1 option per day	100mL	
9-18- year-old	• 1-2 options per day		
Cereal - hot			
<1 year-old	• 1 option per breakfast meal	45g cooked weight	• Pureed texture
1-8- year-old		90g cooked weight	
9-18- year-old		150-180g cooked weight	
Cereal - cold			
<1 year-old	• 2 options per breakfast meal	10g rice cereal or other infant cereal (dry weight) Or	

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
		1 breakfast biscuit (e.g., Weetbix)	
1-8- year-old 9-18- year-old	• 4 options per breakfast meal	Portion packs where available or 30g serve	
Breakfast – Protein *Continental or Cooked service*			
<1 year-old 1-8- year-old 9-18- year-old	• 1 option per breakfast meal (providing a min 5g of protein)	100-150g yoghurt or 1 egg, or 20g cheese, or 110g baked beans (>1yo only)	• Other low-protein options, such as spaghetti, tomato, and mushrooms, can be offered as optional additions.
Bread			
<1 year-old 1-8- year-old 9-18- year-old	• 2 options at each main meal	1 slice 1 roll (30g)	• A variety of bread is offered including white and whole meal. • Wholegrain / multigrain is also offered for >1yo.
Margarine and Butter			
<1 year-old 1-8- year-old 9-18- year-old	• 1 margarine option at each main meal. (1 portion to be used for 2 slices of bread)	Not less than 7g	• Butter may also be offered (optional)
Spreads			
<1 year-old	• Optional 1 option per breakfast meal offered	Portion control packs where available	• 1 variety available each day. E.g., Jam • Honey should not be offered. • Vegemite should not be offered but can be available if requested. • Low joule spreads should not be offered. • Peanut butter* is optional. • Peanut butter is not included as part of a default meal.
1-8- year-old			

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
9-18- year-old	• 3 options per breakfast meal		• At least 3 varieties are offered each day. E.g., Jams, marmalade, honey and vegemite. • Low joule spreads should not be offered. • Peanut butter* is optional. • *If peanut butter is available, the facility must have procedures in place to manage risk of allergen exposure at the ward level. • Peanut butter is not included as part of a default meal.
Cold beverages *Milk and other options*			
<1 year-old	• 1 milk option at breakfast when cereal is served • Not appropriate to offer as beverage	150mL	• Full cream milk only to be offered. • Soy milk to be available on request.
1-8- year-old 9-18- year-old	• 2 milk options ate each main meal and mid-meal • Water offered at all main and mid meals. • Other drinks optional		• Full cream and reduced fat milk are offered at each meal. • Only full cream milk is offered for children <2-year-old. • Soy milk to be available on request. • Flavoured milk optional. • Cordial and soft drinks optional but must not be included as part of a default meal or midmeal.
Hot beverages			
<1 year-old 1-8- year-old 9-18- year-old	• Not to be offered.		
Sugar and Sugar substitute			

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
<1 year-old	• Not to be offered		
1-8- year-old	• 1 sugar option – at meals when cereal served	Portion control packs	• Sugar offered as an option with cereals. • Sugar substitutes should not be offered. • Sugar is not to be included as part of a default meal.
9-18- year-old			
Soup			
<1 year-old	• Not to be offered		
1-8- year-old	If offered, then the following applies: • 1 option – Band 1 – at 1 main meal occasion per day • Any additional soups offered can be Band 1 or 2.	90ml	• If offered on the menu, the facility must have procedures in place to minimise the risk of burns or scalds. • Soups are not included as part of a default meal.
9-18- year-old		180ml	
Hot choice (main) *Meat / fish / poultry / vegetarian*			
<1 year-old	• At least 1 option at 2 main meals occasions per day (2 options per day)	45g	• Predominantly single ingredient meat / poultry / fish cooked with no added salt. • Texture modification must be appropriate for the age category** • At least one hot choice per day must be red meat. • A variety of meat options are offered at consecutive meals.
1-8- year-old	• 2 options at 2 main meals occasions per day (4 options per day) • 1 option per main meal – must be Band 1 or Band 2 – Meat / Poultry / Fish	As determined in bands. Small – standard serve	• At least 1 hot choice per day must be red meat. This is excepted if red meat is offered in a main salad or sandwich on that day. • A variety of meat options are offered at consecutive meals.
9-18- year-old		As determined in bands. Standard serve	

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
	• 1 option per main meal – any band Meat / Poultry / Fish or Band 1 Vegetarian • Optional: 1 unbanded option / comfort food choice.		• Fish is offered 2-3 times per week (this may be in hot main or main salads or sandwiches) • 1 hot choice per day is a vegetarian option. This is excepted if a vegetarian main salad or sandwich is offered as an alternative. • Note: Future goal is to move towards a minimum of 1 vegetarian main meal option per day as part of the main meal options. • 1 comfort food option / non nutrition focused options can be included as a choice per meal, but it must be in addition to the minimum number of banded options. • Paediatric friendly choices are included, including use of tender meats, and options not too spicy. • All choices are free of bones and gristle and are not tough to chew. For 1–8-year-olds: • Texture modification must be appropriate for the age category*** • 1 hot choice per meal must be a softer / moist option, and 1 choice a finger food option. For 14 – 18-year-olds: • An option of a large serve size for hot main options is available.
Potato, rice, pasta and others*			
<1 year-old	• 1 option at each meal offering main hot choices	40g	• An alternative to potato is offered at least once per day. (>7mo)

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
1-8- year-old	• 2 options at each meal offering main hot choices	40-60g	• Rice or pasta is offered when it would be a typical accompaniment with a meal. • Small serves that are fortified with protein / energy are available (where possible). • Recipe based dishes must comply to the sodium and saturated fat limits stated in the nutrient goal standards. • Texture modification must be appropriate for the age category*** For 14 – 18 year olds: • An option of a large serve size is available.
9-18- year-old		80-120g	
Vegetables, including side salads			
<1 year-old	• 1 option at each meal offering main hot choices	35g per vegetable	• Option may be red / orange / green vegetable. • Texture modification must be appropriate for the age category***
1-8- year-old	• 2 options at each meal offering main hot choices • 1 option per day may be a Band 3 side salad. • Soups containing a significant amount of vegetable / serve can contribute to vegetable options	1-3yo 35g per vegetable (Standard serve can be requested) 4+yo 70g per vegetable (Small serve can be requested) 90g side salad	• At least 1 red / orange vegetable is offered per day. • At least 1 one green vegetable is offered per day. • Texture modification must be appropriate for the age category*** For 14 – 18 year olds: • An option of a large serve size is available.
9-18- year-old		70g per vegetable 90g side salad	
Sandwich			
<1 year-old		2 slices of bread	For <1 year old:

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
	• 1 option – Band 1 – at 2 main meal occasions per day.	Large serve is 3 slices of bread.	• At least 1 sandwich option made with whole meal is offered per day. • Multigrain bread is not offered.
1-8- year-old			• At least 1 sandwich option made with whole meal or multigrain bread is offered per day. • 1 sandwich per day is a vegetarian option. This is excepted if a vegetarian hot choice or main salad is offered as an alternative. For 14 -18-year-olds: • An option of a large serve size is available.
9-18- year-old			
Salad – as a main meal			
<1 year-old	• Not to be offered.		
1-8- year-old	• 1 option – Band 1 or Band 2 – at 1 main meal per day.	Minimum of 4 different vegetables with minimum total weight of 90g	• Portion control salad dressings are offered. For 1 - 8-year-olds: • An option of a small serve size is available. (Where practicable.) For 14 -18-year-olds: • An option of a large serve size is available (Where practicable.)
9-18- year-old			
Condiments			
<1 year-old	• Not to be offered.		
1-8- year-old	• May be offered or available on request.	Portion control pack	• A range of condiment options to be available. E.g., Tomato sauce, mayonnaise • Salt sachets should not be offered.
9-18- year-old			
Desserts			

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
<1 year-old 1-8- year-old 9-18- year-old	• 2 options per day at main meals • 1 option must be Band 1		• Texture modification must be appropriate for the age category***
Nutrient dense snacks** (high energy / high protein)			
<1 year-old	• Not to be offered. • May be requested.		• Options should not be offered but can be available if requested. • A small finger food option of appropriate texture for the age group is preferable.
1-8- year-old 9-18- year-old	• 2 options at 1 mid meal occasion per day	Portion control packs	• At least two different nutrient dense snacks options should be available each day (>500kJ per serve and at least one with >3g protein). Snacks can address both high energy and high protein • Range should include both savoury and sweet options. • Range should include child friendly options including snacks appropriate for young children.
Other Snacks**			
<1 year-old	• Not to be offered. • May be requested.		• Options should not be offered but can be available if requested. • A small finger food option of appropriate texture for the age group is preferable.
1-8- year-old 9-18- year-old	• 2 options at each mid meal per day	Portion control packs	• At least two different lower energy, nutritious snacks options should be available each day. (<400kJ per serve) • Avoid offering dry, hard biscuits that may impose a choking risk.

Menu Item	Minimum Offering / Choice – variety and frequency	Minimum standard serve	Menu Design Standards
			• Range should include both savoury and sweet options. • Range should include child friendly options including snacks appropriate for young children.

* This menu group category includes, but is not limited to noodles, cous cous, and other grains. Bread is excluded as it is included in a separate menu group category.

****Provision of midmeals**: Midmeals are valuable to support the grazing preferences of paediatrics. Midmeals may be delivered by a mid-meal service, or alternatively a ward-based supply of midmeal snack items can support this.

*****Texture Requirements and Serve Size Summary**

Age	Developmental and behavioural considerations for food provision
Infants 0–6 months	• Solids are introduced as single-ingredient, pureed food items. • Small serve sizes will be available for this age group.
Infants 7–12 months	• Mixed textures are required for this age group with food texture progressing from puree, mashed and cut up, to finger food. Many infants will commonly eat a variety of these textures. • Small serve sizes will be available for this age group.
1–3 years	• Textures have progressed to full / standard textures, or textures with small modifications (E.g., chopped). Finger foods are also required as they are important in the development of eating skills. • Small serve sizes will be available for this age group.
4–8 years	• This age group does not require modification to texture. • Serve sizes may be a combination of small to standard serves for this age group.
9–13 years	• This age group does not require modification to texture. • Standard serve sizes will be offered for this age group. • Growth spurts result in increased nutritional demands, sometimes requiring access to larger serves.
14–18 years	• This age group does not require modification to texture. • Standard serve sizes will be offered for this age group, but larger serve sizes will be available for adolescents.

Sample Minimum Choice Template

The number indicates the minimum number of choices for that group offered on the menu. These provide the opportunity for the patient to choose items at the mealtime. Eg: Spreads – 3 indicates that 3 choices of spreads are to be offered at that meal. +/- indicates an optional choice to offer.

	Breakfast	Midmeal - AM	Lunch	Midmeal - PM	Dinner	Midmeal - Supper
Fruit	Fruit - 1	Fruit - 1	Fruit - 1	Fruit - 1	Fruit - 1	
Juice	Juice – 1 (>1yo only)		Juice – 1 (>1yo only)		Juice – 1 (>1yo only)	
Cereal - hot	Hot cereal - 1					
Cereal - cold	Cold cereal – 2 (<1yo) Cold cereal – 4 (>1yo)					
Breakfast - Protein	Protein source - 1					
Bread	Bread – 2 (White / wholemeal)		Bread – 2 (White / wholemeal) (>1yo only) (White / multigrain)		Bread – 2 (White / wholemeal)	
Margarine & Butter	Margarine – 1 +/- Butter - 1		Margarine – 1 +/- Butter - 1		Margarine – 1 +/- Butter - 1	
Spreads	Spreads – 1 (<1yo) Spreads – 3 (>1yo)					
Cold beverages	Plain Milk – 1 (<2yo) (Full fat only) Plain Milk - 2 (>2yo only) (Full fat / reduced fat) +/- Other options - 1 (>1yo only)	Plain Milk - 2 (>2yo only) (Full fat / reduced fat) +/- Other options - 1 (>1yo only)	Plain Milk - 2 (>2yo only) (Full fat / reduced fat) +/- Other options - 1 (>1yo only)	Plain Milk - 2 (>2yo only) (Full fat / reduced fat) +/- Other options - 1 (>1yo only)	Plain Milk - 2 (>2yo only) (Full fat / reduced fat) +/- Other options - 1 (>1yo only)	Plain Milk - 2 (>2yo only) (Full fat / reduced fat) +/- Other options - 1 (>1yo only)

Hot beverages	Not offered	Not offered	Not offered	Not offered	Not offered	Not offered
Sugar /substitute	Sugar – 1 (>1yo only) Substitute – not offered					
Soup			Soup – 1 (Band 1) (>1yo only)			
Hot choice - main			Hot – Red Meat – 1 (Band 1) Hot – Poultry – 1 (any band) (>1yo only)		Hot – Vegetarian – 1 (Band 1) Hot – Fish – 1 (any band) (>1yo only)	
Potato, pasta, rice and others*			Potato – 1 Rice – 1 (>1yo only)		Potato – 1 Pasta – 1 (>1yo only)	
Vegetables, including side salads			Vege – Orange – 1 Vege – Any colour – 1 (>1yo only)		Vege – Green – 1 Vege – Side salad – 1 (>1yo only)	
Sandwich			Sandwich - white – 1 (Band 1)		Sandwich – w/meal – 1 (Band 1)	
Salad – main			Salad main – 1 (Band 1) (>1yo only)			
Condiments	Condiment options availble on request.		Condiment options availble on request.		Condiment options availble on request.	
Desserts			Dessert – 1 (Band 2)		Dessert – 1 (Band 1)	

Nutrient dense snack		Nutrient dense snack – 2 (>1yo only)				
Other snacks		Other snack – 2 (>1yo only)		Other snack – 2 (>1yo only)		Other snack – 2 (>1yo only)

Note: The above is a sample template and not a prescribed model.

References [Will be relocated to References page]

1	The Five Food Groups [Internet]. eatforhealth.gov.au. 2015 [cited 11 March 2022]. Available from: https://www.eatforhealth.gov.au/food-essentials/five-food-groups
2	do Rosario V, Walton K. Hospital Food Service [Internet]. 2019 [cited 28 March 2022]. Available from: https://www.researchgate.net/publication/343494490_Hospital_Food_Service doi: 10.1007/978-3-319-75388-1_74-1.

Paediatric Inpatients | Special Considerations:

Special Considerations for children within a paediatric inpatient health facility.

The Nutrition Standards for paediatrics are designed to be appropriate for most acute paediatric patients in hospital, guiding the design of an inpatient hospital menu which will meet the nutritional needs of most hospital paediatric inpatients whether they are admitted to the local, district hospital or a tertiary-referral, paediatric hospital. For the paediatric population, each stage of development presents different nutritional requirements. These are reflected in the National Health and Medical Research Council (NHMRC) *Nutrient reference standards for Australia and New Zealand*.[1] In addition there are some specific nutritional needs or challenges which must be considered and planned for when designing hospital menus. Doing this will achieve a patient centred menu design.

Some specific nutritional needs cannot be fully satisfied by the standard inpatient menu. In these instances, the facility must offer the opportunity for the patient to be transitioned to a diet targeting their specific needs. These diets include therapeutic diets, operational diets or diets for religion / culture / lifestyle / life stage. The composition and design of these diets are guided by the ACI Diet Specifications .

Special Considerations

The following patient groups should have their nutritional needs provided by the standard diet, but some special considerations are required during menu design.

Short stay patients

Short stay are patients are those who are in hospital for 3 or less days. They may include patient cohorts such as patients admitted for acute viral illness deterioration for review (e.g., bronchiolitis) or scheduled day procedures.

It should not be assumed that short stay patients are not at nutritional risk. Some short stay patients may have history of frequent short stay readmissions due to the nature of their illness. Other short stay patients may have become at nutritional risk prior to their short stay admission. The completion of nutrition screening of these patients will guide in determining if these patients are at nutritional risk [2].

If nutritional screening indicates the need for a therapeutic diet, this should be ordered.

When determining the needs of the patients of the health facility, it may be identified that some patient cohorts are consistently a short length of stay and are also most commonly screened as low nutritional risk. Such cohort groups may be suitable for a shorter stay menu. The menu design standards may guide in strategies to manage this.

Our paediatric patients in NSW Health inpatient health facilities*:

In Specialist Paediatric facilities, 73.4% of the episodes were for 1-3 days and the median age of the patient was 4.7 years old.

In other paediatric wards / units, 81.9% of the episodes were for 1-3 days and the median age of the patient was 5.2 years.

* Paediatrics only, excluding mental health in the 5 years 2015/16 to 2019/20.

Long stay and very long stay patients

Long stay patients are those who are in hospital for 7 days or more. They may include patient cohorts such as rehabilitation, spinal injury, patients with acute deterioration of chronic and complex conditions, eating disorder patients, patients with child protection concerns and/or psychosocial complexities, children requiring inpatient oncology treatment, or organ transplant patients.

Very long stay patients are those who are in hospital for 4 weeks or more. Malnutrition is more prevalent in patients with longer lengths of stay. [4] The completion of nutrition screening of these patients will guide in determining if these patients are at nutritional risk.

If nutritional screening indicates the need for a therapeutic diet, this should be ordered.

Menu fatigue is a common risk, for long stay, and in particular very long stay patients. Reduced intake is often a consequence which further impacts nutrition risk.

Patients require the opportunity of extended choice and provision of additional options when they have been an inpatient for an extended length of stay. The menu design standards may guide in strategies to manage this.

Our paediatric patients in NSW Health inpatient health facilities:*

In Specialist Paediatric facilities, 10.8% of the episodes were for 8+ days and the median age of the patient was 8.1 years old.

If they remain admitted for more than 8 days, their average length of stay was 21.1 days.

If they remain admitted for more than 21 days, their average length of stay ranged from 47.1 – 59.4 days depending on their age group.

In other paediatric wards / units, 4.4% of the episodes were for 8+ days and the median age of the patient was 14.5 years.

If they remain admitted for more than 8 days, their average length of stay was 22.3 days.

If they remain admitted for more than 21 days, their average length of stay ranged from 33.5 – 55.5 days depending on their age group.

* Paediatrics only, excluding mental health in the 5 years 2015/16 to 2019/20.

Patients with Food Allergies

ASCIA defines a food allergy as "when the immune system reacts to a food (allergen), which is usually harmless. The immune system produces allergy antibodies called Immunoglobulin E (IgE) that can result in symptoms." [4,5] A reaction to a food allergen can range from a mild or moderation reaction to a severe, life-threatening anaphylactic reaction.[4]

Food allergy prevalence has been increasing in Australia and is very prevalent in paediatric populations. The National Allergy Strategy reports that food allergy is prevalent in 10% of infants [6,9] and 5% in children aged 10-14 years of age [7,9]. Anaphylactic reactions triggered by a food allergy have also increased in prevalence, with increasing hospital admissions for anaphylaxis increasing 5-fold between 1993 – 2013 [5,9]. It is also reported that there is an increase in fatalities from food-induced anaphylaxis, increasing by around 10% each year [8,9].

This means that paediatric inpatient facilities must be extremely diligent with their protocols in managing patients with known food allergies – with the initial and crucial requirement being identification of those with a food allergy with the appropriate communication of this to ensure that the patient is safely managed during their hospital admission. This includes having diets available to order which will exclude the diet allergen for the patient. The patient, parents / carers of children with known food allergies, must feel confident that appropriate strategies exist to keep the children safe.

The standard hospital menu for infants, children or adolescents are not intentionally designed to be allergen free. This is not practical and not a recommended strategy to be implemented by the National Allergy Strategy. [9]

To assist in managing food related allergies, if the standard diet does not offer choice which excludes the child's food allergen, the facility must offer the opportunity for the patient to be transitioned to an appropriate therapeutic diet targeting their identified food allergy/s. The composition and design of these diets are guided by the ACI Diet Specifications .

Patients who are Overweight or Obese

The rate of childhood obesity and being overweight is high in Australia with 25% (2017-18) of Australian children and adolescents aged 2–17 being overweight or obese, and 8.2% being obese. The Longitudinal Study of Australian Children also demonstrated that the prevalence of overweight and obesity increases with age, increasing to 31% of adolescents at age 16–17. [10]

In 2015-16, a NSW Premier's priority target was defined to reduce childhood overweight and obesity to 16.5% in 2025. Strategies to support this work have been implemented by the NSW Ministry of Health. [11,12]

The standard hospital menu for infants, children or adolescents is based on healthy eating principles offering a range of foods from the core food groups. These standard menus enable the patient to select healthy foods during their hospital admission, which is appropriate for a child who is overweight or obese. When an infant, child or adolescent is unwell, they may be experiencing barriers to an adequate nutritional intake and therefore it may be necessary to access options to increase their energy and nutrient intake to support both recovery in addition to growth and development. If these increased needs cannot be met by the options on a standard hospital menu for infants, children or adolescents, they may need to be transitioned to an appropriate therapeutic diet targeting their identified needs. The composition and design of these diets are guided by the ACI Diet Specifications .

Patients requiring a therapeutic diet.

Therapeutic diets are those which have modified nutrient goals and specifications / controls around foods and fluids, for the purpose of being used as part of medical therapy. They are available for use when the standard diet is not designed to meet the therapeutic goal of the diet.

Therapeutic diets are most appropriate for use for patients requiring:

- Allergy diets
- Nutrient modified diets
- Procedural or test diets
- Texture modified diets

Therapeutic diets must comply with the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets, they will be able to meet the nutrition goals and menu choice standards while others may be limited due to the nutrient composition or modifications in the diet.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Patients requiring a diet to meet their religion or culture / lifestyle / life stage choice:

Diets for Religion or Culture

Some religions or cultural practices involve adherence to particular dietary restrictions or practices. It is important that a health facility is familiar with the religious and cultural requirements of their patient population,

and that the food preferences are incorporated into the menu design. This may allow patient to meet their dietary restrictions from the standard menu.

There is also the opportunity to transition to a religious diet if additional food options / additional requirements or restrictions are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Vegetarian and vegans

Vegetarian / plant-based diets are becoming preferred for personal, religious, cultural or sustainability reasons. Vegetarian diets can be nutritious but there are some additional considerations needed when planning a menu.

The standard menu will have available a range of plant based / vegetarian choices available to select from each day. This will include meat and dairy substitutes. Nutrients at risk in this patient group include vitamin B12, vitamin D, calcium, iron, zinc and long-chain n-3 fatty acids [13,14]. Options will be available on the menu to meet these requirements. To improve iron absorption, the menu should offer a good source of vitamin C at each meal, e.g., fruit juice or salad.

There is the opportunity to transition to a Vegetarian or Vegan diet if additional food options are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications.

Patients requiring an Operational Diet

Operational diets are those designed with modifications to the menu choices with the intent to support patient consumption. They are available for use when the standard diet is not meeting specific need of a patient.

Operational diets are most appropriate for use for patients requiring modified serving sizes, modified presentation (e.g., finger food) or modified texture for a non-therapeutic reason (e.g., cut up).

Operational diets must comply with the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets some will be able to meet the nutrition goals and menu choice standards while others may be limited due to the composition or modifications in the diet.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

References [Will be relocated to References page]

1.	Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes, 2006, Upd 2017, NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/about-us/publications/nutrient-reference-values-australia-and-new-zealand-including-recommended-dietary-intakes
2.	NSW Health Policy - Nutrition Care PD2017_041 [Internet]. NSW Health Policy. 2017 [cited 21 March 2022]. Available from: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_041.pdf
3.	do Rosario V, Walton K. Hospital Food Service [Internet]. 2019 [cited 28 March 2022]. Available from: https://www.researchgate.net/publication/343494490_Hospital_Food_Service doi: 10.1007/978-3-319-75388-1_74-1.
4.	Food allergy FAQs - Australasian Society of Clinical Immunology and Allergy (ASCIA) [Internet]. Allergy.org.au. 2021 [cited 23 March 2022]. Available from: https://www.allergy.org.au/patients/food-allergy/faqs
5.	2_Overview of allergies and anaphylaxis in Australia [Internet]. Aph.gov.au. 2020 [cited 23 March 2022]. Available from: https://www.aph.gov.au/Parliamentary_Business/Committees/House/Health_Aged_Care_and_Sport/Allergiesandanaphylaxis/Report/section?id=committees%2Freportrep%2F024422%2F72559
6.	Osborne N, Koplin J, Martin P, Gurrin L, Lowe A, Matheson M et al. Prevalence of challenge-proven IgE-mediated food allergy using population-based sampling and predetermined challenge criteria in infants. Journal of Allergy and Clinical Immunology. 2011;127(3):668-676.e2.
7.	Sasaki M, Koplin J, Dharmage S, Field M, Sawyer S, McWilliam V et al. Prevalence of clinic-defined food allergy in early adolescence: The SchoolNuts study. Journal of Allergy and Clinical Immunology [Internet]. 2017 [cited 23 March 2022]. Available from: http://dx.doi.org/10.1016/j.jaci.2017.05.041
8.	Mullins R, Liew W, Wainstein B, Barnes E, Campbell D. Anaphylaxis Fatalities in Australia 1997 to 2013. Journal of Allergy and Clinical Immunology. 2016;137(2): AB57.
9.	National Allergy Strategy. New allergy guidelines to protect children from severe allergic reactions in schools and childcare [Internet]. 2022. Available from: https://nationalallergystrategy.org.au/images/news/releases/NAS_Best_Practice_Guidelines_media_release_FINAL.pdf
10.	Overweight and obesity among Australian children and adolescents, Summary - Australian Institute of Health and Welfare [Internet]. Australian Institute of Health and Welfare. 2020 [cited 23 March 2022]. Available from: https://www.aihw.gov.au/reports/overweight-obesity/overweight-obesity-australian-children-adolescents/summary
11.	NSW Government Centre for Population Health. Premiers Priority: Reduce Overweight and Obesity Rates of Children by 5% over 10 Years. Sydney: NSW Government; 2016. Available from: https://www.health.nsw.gov.au/heal/Publications/premiers-priority-childhood-obesity-delivery-plan.pdf
12.	NSW Ministry of Health. Childhood Overweight and Obesity Snapshot. Sydney: NSW Government; 2018. Available from: https://www.health.nsw.gov.au/heal/Publications/child-obesity-snapshot.pdf.
13	Nutrition Care Manual [Internet]. Chicago: Academy of Nutrition and Dietetics.; 2018 [cited 23 March 2022]. Available from:

	https://www.nutritioncaremanual.org/topic.cfm?ncm_toc_id=273851&lv3=273851&ncm_heading=Nutrition%20Care&lv1=38544&ncm_category_id=1&lv2=144609
14.	Diet and nutrition health advice – What is a vegetarian diet? [Internet]. Dietitians Australia. 2022 [cited 23 August 2022]. Available from: https://dietitiansaustralia.org.au/health-advice/vegetarian-diet

Others…. Temporary reference

Infant Feeding Guidelines - 2013

https://www.eatforhealth.gov.au/sites/default/files/files/the_guidelines/n56b_infant_feeding_summary_130808.pdf

Food for Infants – Food Standard 2.9.2 - 2016

https://www.foodstandards.gov.au/code/Documents/2.9.2%20Food%20for%20infants%20v157.pdf

Infant and young child feeding – WHO - 2021

https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding

Food Standards – Mercury in Fish - 2020

https://www.foodstandards.gov.au/consumer/chemicals/mercury/Pages/default.aspx

Paediatric Inpatients | Our Patients:

When planning a menu for your health facility, it must involve engagement with key stakeholders, and consider the demographics of your health facility population, their length of stay and the religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting. This will help inform decisions about the menu that is suitable for your facility.

When data was assessed for NSW Health facilities, over the 5 years 2015/16 to 2019/20, the following key findings were identified:

Key Facts - Paediatric Inpatients: [For display as infographics]

- Average LOS – all ages is 25% longer in specialist paediatric facilities at 4.2 days versus 2.9 days in other paediatric wards / units.
- 1 in 10 admissions are admitted for more than 7 days in specialist paediatrics facilities, versus almost 1 in 25 in other paediatric wards / units.
- More than 1 in 4 admissions are admitted for more than 3 days in specialist paediatrics facilities, versus almost 1 in 6 in other paediatric wards / units.
- When LOS exceeds 21 days, average LOS days ranges from 33.5 to 59.4 days across all episodes.
- The 1 – 3-year-old age group has the highest representation of episodes in specialist paediatrics (25.0%), whereas in other paediatric wards / units the 1 – 3-year-old age group (23.4%) and 14–18-year-old age group (24.8%) have the highest representation.

Age Groupings of Admitted Paediatric Inpatients

Specialist Paediatric Inpatients

Age Group	Median LOS (days)	Average LOS (days)	% of Episodes
0-6 months	2	5.0	15.7%
7-12 months	2	3.6	3.7%
1-3 years	2	3.2	25.0%
4-8 years	2	3.6	20.7%
9-13 years	2	4.6	17.5%
14-18 years	2	5.6	17.4%
All ages	2	4.2	

Other Paediatric Inpatients.

Age Group	Median LOS (days)	Average LOS (days)	% of Episodes
0-6 months	2	3.6	17.6%
7-12 months	2	2.5	4.7%
1-3 years	1	2	23.4%
4-8 years	1	1.7	16.9%

9-13 years	1	2.2	12.6%
14-18 years	2	4.3	24.8%
All ages	2	2.9	

Length of Stay - Admitted Paediatric Inpatients

Length of Stay – Specialist Paediatric Inpatients - All admissions

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-7 days	2.2	2	4.9	89.2%
8+ days	21.1	13	8.1	10.8%
All days	4.2	2	5.1	

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-3 days	1.6	1	4.7	73.4%
4 – 7 days	5.1	5	6.0	15.8%
8+ days	21.1	13	8.1	10.8%
All days	4.2	2	5.1	

Length of Stay – Other Paediatric Inpatients - All admissions

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-7 days	2.0	1	4.8	95.6%
8+ days	22.3	14	14.5	4.4%
All days	2.9	2	5.0	

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-3 days	1.5	1	5.2	81.9%
4 – 7 days	4.6	4	1.8	13.7%
8+ days	22.3	14	14.5	4.4%
All days	2.9	2	5.0	

Length of Stay – Aged Grouped – Specialist Paediatric Inpatients

LOS Group	Age Group (years)					
	0-6 months	7-12 months	1-3	4-8	9-13	14-18
	Average LOS (days)					
1-3 days	1.7	1.6	1.5	1.5	1.6	1.6
4-7 days	5.0	5.0	5.1	5.1	5.2	5.1
8-14 days	10.2	9.9	10.2	10.2	10.5	10.6
15-21 days	17.5	18.1	17.2	17.2	17.4	17.5
21+ days	59.4	51.4	47.4	47.8	49.2	47.1
All LOS	5.0	3.6	3.2	3.6	4.6	5.6

LOS Group	Age Group (years)					
	0-6 months	7-12 months	1-3	4-8	9-13	14-18
	Average LOS (days)					
1-7 days	2.3	2.2	2.0	2.1	2.3	2.4
8+ days	25.2	21.2	18.9	19.9	19.9	21.7
All LOS	5.0	3.6	3.2	3.6	4.6	5.6

Length of Stay – Aged Grouped – Other Paediatric Inpatients

LOS Group	Age Group (years)					
	0-6 months	7-12 months	1-3	4-8	9-13	14-18
	Average LOS (days)					
1-3 days	1.7	1.7	1.5	1.4	1.5	1.6
4-7 days	4.5	4.3	4.4	4.8	4.8	5.0
8-14 days	10.3	9.3	9.5	9.8	10.4	10.4
15-21 days	17.7	15.9	15.9	16.2	17.4	17.4
21+ days	33.5	34.5	45.5	33.7	38.3	55.5
All LOS	3.6	2.5	2.0	1.7	2.2	4.3

LOS Group	Age Group (years)					
	0-6 months	7-12 months	1-3	4-8	9-13	14-18
	Average LOS (days)					
1-7 days	2.5	2.4	1.9	1.6	1.8	2.1
8+ days	19.2	11.9	14.4	13.3	16.5	26.6
All LOS	3.6	2.5	2.0	1.7	2.2	4.3

Data Source Information:

Data source:

NSW Admitted Patient Data Collection (APDC) extracted from Hospital Performance Dataset (HoPeD) accessed via Secure Analytics for Population Health Research and Intelligence (SAPHaRI).

Data Scope:

- Data collection period is 5 years: FY 2015/16 to 2019/20
- Data includes all overnight hospital admissions from NSW public hospitals.
- Total episodes: Other paediatrics 96 649 and Specialist Paediatrics 55 343

- Exclusions include:
  - Same day admissions (admission and discharge dates are the same)
  - Renal dialysis admission (regardless of length of stay)
  - Newborn admissions
  - Admissions from facilities other than hospitals (e.g., age care)
  - Hospital in the home admissions

Definitions:

- Paediatric has been defined as 0-18yo to correspond to ACI developmental age diet groupings.
- Does not include those with a mental health care type. These were included in the Mental Health data.

Paediatric data was categorised in two ways:

- **Specialist Paediatric Facilities**: Paediatric admissions specifically in Sydney Children's Hospital Network (Randwick and Westmead) and John Hunter Children's Hospital which are specialist paediatric facilities. This group will be referred to as Specialist Paediatrics in the data summary tables.
- **Other Paediatrics:** All other paediatric admissions to facilities other than Sydney Children's Hospital Network (Randwick and Westmead) and John Hunter Children's Hospital. This group will be referred to as Other Paediatrics in the data summary tables.

- Other care: Includes "Hospital Boarder" and "Other Admitted Patient Care". As defined in the admission data dictionary. "The principal clinical intent does not meet the criteria for any other category".

Disclaimer:

- Content within this publication was accurate at the time of publication.
- This work is copyright. It may be reproduced in whole or part for study or training purposes subject to the inclusion of an acknowledgment of the source. It may not be reproduced for commercial usage or sale.
- Reproduction for purposes other than those indicated above requires written permission from the Agency for Clinical Innovation.
- The data is representative of the whole state and that it is important in menu design that the population data for the individual facility is considered.

Mental Health Inpatients | Nutrient Goals:

Key changes to this section include:

- Design the nutrient Standards so they can be used as a compliance criteria for auditing
- Commentary around incorporating higher salt food choices
- Removed magnesium and omega 3 fat nutrient goals
- Added Vitamin D guidance statement

No changes made to

- Upper limit for sodium

Nutrient Goals – Mental Health Inpatients.

Nutrient goals guide the amount of a nutrient which needs to be consumed to avoid the health risks of deficiency or over consumption. They are evidence informed and form the basis of nutrition recommendations.

In menu planning for inpatients, it is important that the standard hospital menu **provides opportunity** to meet the nutrient goals from a range of meal items chosen from the menu (assuming it was eaten.) Providing this range of food choices reduces the risk of inpatients developing malnutrition during their admission and supports patients to make healthy choices for chronic disease management

Nutrient goals are nutrient reference values guided by the 2017 Nutrient Reference Values for Australia and New Zealand (1). When planning for heterogeneous groups, such as hospital inpatients, where nutrient requirements are not uniform across the group (due to age and gender variables), the upper reference value appropriate for the hospital population was chosen. These values provide a high level of assurance that most patients will be able to meet their individual nutrient needs from the standard menu. The nutrient goals in this document are not designed for adolescents or older women who have higher energy or calcium requirements (1). The nutrient goals are also different to those for adult inpatients in short-stay settings, who often need intensive nutritional support, although many of the menu-planning principles will still apply

The standard menu should be capable of meeting nutrient targets for:

- daily energy
- daily protein
- micronutrients (vitamins and minerals) and other macro nutrients averaged over a week

Nutrient goal standards are recommended actions that are required to be achieved to design a menu with capability of meeting the nutrient goals. They allow for the ability to benchmark the suitability of hospital menus from a nutritional perspective. This is achieved by assessing compliance to the nutrient goal standards.

Rationale / commentary provides explanations of any variation or considerations in defining the nutrient goal targets. They also outline key considerations used to develop nutrient goal standards for the nutrient.

When developing the nutrient goals, nutrient goals were not listed for all nutrients outlined in the Nutrient Reference Values for Australia and New Zealand. Nutrients likely to be important to hospitalised patients were prioritised. An assumption is made that if menus are designed to meet specified nutrient goals, it is likely the requirements for other essential nutrients (e.g., thiamin, vitamin A, magnesium or potassium) will also be met.

Application Tip:

When assessing a menu against the Nutrient Goals, the objective is that the menu complies to the criteria outlined in the Nutrient Goals and Nutrient Goal Standards columns.

Macronutrient Goals

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Energy	8000kJ/day	• The menu provides opportunity to choose a range of food and fluids of appropriate energy content to achieve the nutrient goal for energy.† • Lower energy density meals are also offered. • Access to large serves or extra serves is available. • Access to energy fortified / nutrient dense options are available for those with smaller appetites. • A lower energy mid-meal snack, with not more than 400kJ per serve is offered at each mid meal. A high energy mid-meal snack, with at least 500kJ per serve is available to access for those who require additional energy. (This may be a combined high protein / high energy snack.)	• 8000kJ is based on a reference adult male of 76kg‡, 105 kJ/kg/day. (1,2,3) • Inpatients of Mental Health facilities are very heterogenous, with ranging ages, activity levels, medical histories and lengths of stay. • A less obesogenic diet is recommended for people with mental health issues due to higher levels of chronic diseases; however individual energy requirements will vary. • Medications commonly used in the treatment of severe mental illness can increase appetite, reduce satiety and promote weight gain. Therefore some individuals may require a restricted energy diet to manage weight gain. The standard menu must provide lower energy density options to support this goal while also managing satiety. • Mechanisms are needed for patients with higher energy needs to achieve these intakes

† This is determined following an assessment of a minimum 1 weeks' worth of test menus, calculation of the provision of the target nutrient and comparison against the nutrient goal. The nutrient goal for energy and protein must be achievable daily, and the nutrient goal for other nutrients can be achieved on average on a weekly basis.

‡ National Health Survey: First Results, 2017-2018 –Median weight for >18yo females was 68.2kg and for >18yo males was 84.5kg. Mid-range for females and males is 76.3kg.

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
			while selecting from the standard menu. This may include access to additional food options, fortified foods or nourishing snacks, access to therapeutic diets or additional nutrition support.
Protein	90g / day	• The menu provides opportunity to choose a range of food and fluids of appropriate protein content to achieve the nutrient goal for protein†. • High quality protein options are available at each mealtime. This includes a variety of meat, poultry, fish, legumes, milk, eggs, cheese, yoghurt and custard. • A protein source, with at least 5g protein per portion, is offered at breakfast. • Access to large protein serves or extra serves is available. • Access to protein fortified / nutrient dense options are available for those with smaller appetites or increased needs. • A high protein mid-meal snack, with at least 3.0g protein per serve is available to access for those who require additional protein. (This may be a combined high protein / high energy snack.)	• 90g is based on a 76kg‡ adult, who is a hospital inpatient but not severely ill or injured using a mid-range protein requirement (1.2g/kg/day) which aims to cover most consumers in mental health facilities. (1,2,4) • It is expected that patients requiring higher values of protein (>1.5 g/kg/day) would be identified through effective nutrition screening and prescribed appropriate higher levels. • Individuals' protein requirements will vary, and requirements are increased in the malnourished, those with certain diseases and during treatments. • Whilst patients in mental health facilities may not always have increased protein needs, medications can increase appetite thus protein may assist with satiety management. • Mechanisms are needed for some patients to achieve higher protein intakes. This may include access to additional food options, access to

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
			therapeutic diets or additional nutrition support.
Fat	20 – 35% of total energy from fat.	• Low fat products are included on the menu as an option in addition to full fat options. • Less than 20% of hot main menu items have more than 15 g fat per serve.	• The Nutrient Reference Values for Australia and New Zealand do not prescribe a recommended daily intake or upper limit for total fat (1). • Total fat is no longer recognised as a risk factor for cardiovascular disease, but low-fat cooking methods and ingredients will assist in reducing the energy density of the meals, which can help people maintain a healthy weight. • The menu should not be designed to be low in fat but should not be high in fat. • The menu must provide opportunity for consumers to choose a range of lower fat foods, and fluids if preferred. • Fat may assist with satiety.
Saturated Fat and Trans Fat	Ideally, not more than 10% of energy should be from trans and saturated fat with an upper limit of 11%	• A choice of mono-unsaturated or poly-unsaturated spreads are offered at each meal. • Reduced fat dairy foods are offered at each meal. • Reduced fat dairy foods are used in food preparation, where possible. • Hot mains are cooked with unsaturated fat, where appropriate. • Lean meats and poultry are used in food preparation. • Fish is offered at least three times per week (in main meals, salads, or sandwiches). Oily fish such as tuna,	• Saturated and trans fats are dietary risk factors for cardiovascular disease due to their impact on lipid profiles. • The menu should allow patients to select lower saturated fat options. • Food preparation should incorporate use of lower saturated fat ingredients. • Access to a therapeutic low saturated fat diet is to be available for those consumers who require

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		salmon, mullet, or sardines are preferred. • Vegetables dishes are cooked with unsaturated fat, where appropriate. • Potato, rice and pasta dishes have saturated fat levels less than 2g saturated fat per standard serve. • Desserts are prepared with unsaturated fat where appropriate. • Sandwiches are prepared with mono-unsaturated or poly-unsaturated margarine.	a lower prescribed saturated fat intake. • Medications commonly used in the treatment of severe mental illness can alter lipid metabolism and are associated with dyslipidaemia (5,6). • Research has shown that a Mediterannean-style diet (which includes oily fish and olive oil) has been shown to reduce risk of depression and can significantly improve depressive symptons. (7-10) • Mediterannean-style diets are associated with lower levels of inflammation in the body and chronic inflammation is associated with depression (11-16).
Carbohydrate	-	• At least one low glycaemic index (GI) food choice should be available per meal. • All breakfast cereals contain less than 30g sugars/100g • All canned fruit is in natural fruit juice or water, and not syrup. • All fruit juice is to be 100% juice with no added sugar.	• The Nutrient Reference Values for Australia and New Zealand do not prescribe a recommended daily intake or upper limit for carbohydrate (1) • Medications commonly used in the treatment of severe mental illness can alter glucose metabolism and are associated with impaired glucose tolerance and type 2 diabetes.(5,6) • High glyaemic diets with refined carbohydrates and added sugars are associated with inflammation and chronic inflammation is

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
			associated with depression.(14,17) • Low GI carbohydrates can help with maintaining good glycaemic control which is associated with improved cognition and reduced mood swings.(18-20). They also may help consumers maintain a healthy weight.
Fibre	30g/day	• The menu provides opportunity to choose a range of foods of appropriate fibre content to achieve the nutrient goal for fibre.† • At least 50% of cold breakfast cereals provide at least 3g fibre per serve and at least one option should provide >5g/ serve. • Whole meal /multi grain bread and/or high fibre white bread is offered at all meals as an alternative to standard white bread. • Sandwiches made with whole meal /multi grain or high fibre white bread are offered. • Fruit (fresh, canned) is offered at each main meal, and is available as a midmeal option. • Vegetables are offered at a minimum of 2 main meals per day. • A main salad is offered as an alternative to a hot main or sandwich.	• 30g is the daily adequate intake (AI) for adult males. 25g is the daily adequate intake (AI) for adult females (1) • Some medications used to treat mental illness can cause severe constipation. (21,22) • Consuming adequate fibre and adequate fluid intake may prevent and assist with managing constipation. • Fibre is a key component of the Mediterranean diet and fibre is essential to support a healthy and diverse microbiome. Research is indicating how the gut microbiome can influence mental health, brain health, metabolic processes and immune functioning. (23,24)
Fluid	2.1–2.6L/day	• Water is made available at all times for people whom it is clinically suitable - as bottled water, at drinking fountains, or from dedicated taps separate from hand-washing facilities.	• 2.1L is the daily adequate intake (AI) for adult females, and 2.7L is the daily adequate intake (AI) for adult males. (5)

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
		• A selection of beverages, including low joule beverages, is offered at all meals and mid-meals.	• Fluid includes plain water, milk and other hot and cold drinks. • Consuming adequate fluids prevents dehydration and assists with preventing constipation. • Dehydration can impact mood, cognition, and cause fatigue. (25-27) • Use of low joule beverages can assist in reducing overall energy intakes. • The menu, and food service model, must provide opportunity for consumers to access and choose a range of fluids to achieve their fluid requirement.

Micronutrient Goals

Nutrient	Nutrient Goal	Nutrient Goal Standards	Rationale / Commentary
Sodium	Upper intake limit 2300 mg/day	• The menu provides opportunity to choose a range of sodium containing food sources in a day without exceeding the upper limit nutrient goal for sodium†. • Not more than 10% of hot main menu items to have more than 575mg sodium per serve over the menu cycle. (Core main menu only, does not include background menu choices). • High sodium choices included on the menu have an additional high quality nutritional benefit. Eg, also high protein. • Vegetables are cooked without added salt. • Multi ingredient potato, rice and pasta dishes have less than 300mg sodium per serve.	• The Nutrient Reference Values for Australia and New Zealand do not prescribe an upper limit (UL) for sodium, with a stipulation that this does not mean that consumption is safe at any level. They do suggest a daily target of 2000mg. (1,28) • Maintaining an upper limit of 2300mg per day, which was the 2006 UL value, allows for inclusion of varied foods which improve variety and palatability, to optimise food intake for inpatients. It is also in acknowelgement of the reliance on commercial food supply in hospital menu design, and the

		• Single ingredient potato, rice and pasta dishes are cooked with no added salt • Bread has less than 400mg sodium per 100g. • Salt sachets are available as an option. (Salt sachets are not counted in the sodium content of a meal. They are an addition made by the patient. • Default menus are designed to provide not more than 2300mg / sodium per day. • Not more than 10% of the range of midmeal and snack options to have more than 300mg sodium per serve.	recognition that these products often have a higher sodium content. • The menu should not be designed to be low in sodium but should not be high in sodium. • The menu must provide opportunity for a consumer to choose food items totalling <2300mg sodium in a day. • Inclusion of higher salted foods (such as cheese and ham) or meals, which are nutritionally dense and well accepted by patients who are unwell or eating poorly, is acceptable. • Menu planning must consider when higher sodium choices are offered that there are also lower sodium options within that menu group to moderate sodium provided. Similarly, the same consideration applies for side dishes. If a high sodium main dish is offered, lower sodium sides should be offered at that meal. • When a default menu is provided, it should be designed to not exceed the daily sodium upper limit. • Sodium intake reduction is a key public health goal. (1,28,29)

Vitamin C	45 mg/day	• The menu provides opportunity to choose a range vitamin C food or fluid sources to achieve their vitamin C requirement †. • Uncooked sources of vitamin C are offered at each main meal and midmeal. These include fruit, juices, or salads. • Juices contain at least 20mg Vitamin C per 100ml.	• 45mg is the RDI for 19-70+ yo males and females (1) • Vitamin C is a significant vitamin with respect to wound healing and infection resistance. (30) • There are large losses of vitamin C in food service handling, processing and cooking. (31,32) • Uncooked sources of vitamin C must be available to the risk of deficiency.
Folate	400µg/day	• The menu provides opportunity to choose a range of folate containing food sources to achieve the nutrient goal for folate.† • Folate fortified breakfast cereals are offered daily. • A choice of vegetable items is offered to allow for selection of 5 serves of vegetables per day. • A choice of fruit items is offered to allow for selection of 2 serves of fruit per day.	• 400µg is the RDI for adult males and females. (1) • There are large losses of folate in cooking and processing (33)
Calcium	1000 mg/day	• The menu provides opportunity to choose a range of calcium containing food sources to achieve the nutrient goal for calcium.† • Reduced fat dairy products are offered at every main meal and mid meal. • Soy milk or non dairy milk alternatives are available and contain at least 100mg calcium per 100ml.	• 1000mg is the RDI for 19-70 yo males and 19 – 50yo females. This requirement increases to 1300mg males over 70 and females over 50. (1) • Dairy products are the commonly preferred source of calcium however, alternative (non dairy) calcium options must be available to meet patient preferences. • Opportunities must also be available for consumers with increased calcium needs, e.g., adolescents or older persons, to access additional serves.
Iron	11 mg/day	• The menu provides opportunity to choose a range of iron containing	• 18mg is the RDI for 19 – 50yo females. 8mg is the

		food sources to achieve the nutrient goal for iron.† • Iron fortified breakfast cereals are offered daily. • Red meat is offered in at least one main dish / sandwich / main salad per day. • Whole meal breads, eggs, legumes, and white meats are offered on the menu to broaden the variety of iron sources. • A vitamin C source is offered at the same meal (to promote iron absorption).	RDI for all other age groups. (1) • 11mg was chosen as a minimum provision with consideration that ~25% of the admitted population will have increased requirements.
Zinc	14 mg/day	• The menu provides opportunity to choose a range of zinc containing food sources to achieve the nutrient goal for zinc for each age group.† • Meats, fish and poultry are offered daily on the menu. • Cereals and dairy foods are offered daily on the menu.	• 14mg is the RDI for adult males. 8mg is the RDI for adult females. (1) • Ensuring energy and iron intake is sufficient in the menu will assist in providing opportunities for meeting the zinc requirement. • Zinc depletion is associated with decreased taste acuity and poor appetite (30,34). • Zinc deficiencies are associated with depressive symptoms. (35)
Vitamin D	-	• Margarine spreads are fortified with Vitamin D • Fish is offered at least two three times per week (in main meals, salads or sandwiches). Oily fish such as salmon, is preferred. • Eggs are available daily on the menu.	• 80µg is the upper limit for adult males and females (1). • Analysis limitations impact the ability to assess actual intake of Vitamin D. • A nutrient goal is therefore not defined for the standards. • Reporting of Vitamin D intake is not required when assessing against the standards.

References [Will be relocated to References page]

1	Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes, 2006, Upd 2017, NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/about-us/publications/nutrient-reference-values-australia-and-new-zealand-including-recommended-dietary-intakes
2	National Health Survey: First Results, 2017-2018 - Table 8.1 Body Mass Index, waist circumference, height and weight(a)(b), Persons https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release
3	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Dietary Energy**. https://www.nrv.gov.au/dietary-energy
4	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Protein**. https://www.nrv.gov.au/nutrients/protein
5	Blanchard E, Samaras K. Double jeopardy: diabetes and severe mental illness. Addressing the special needs of this vulnerable group. Diabetes Management. 2014;4(4):339-353.
6	Andrews G. Management of mental disorders: Treatment protocol project. Darlinghurst NSW: World Health Organization Collaborating Centre for Mental Health and Substance Abuse; 2000.
7	Jacka F, O'Neil A, Opie R, Itsiopoulos C, Cotton S, Mohebbi M et al. A randomised controlled trial of dietary improvement for adults with major depression (the 'SMILES' trial). BMC Medicine. 2017;15(1). DOI: 10.1186/s12916-017- 0791-y.
8	Lassale C, Batty G, Baghdadli A, Jacka F, Sánchez-Villegas A, Kivimäki M et al. Healthy dietary indices and risk of depressive outcomes: a systematic review and meta-analysis of observational studies. Molecular Psychiatry. 2018;24(7):965-986. DOI: 10.1038/s41380-018-0237-8.
9	Lai J, Hiles S, Bisquera A, Hure A, McEvoy M, Attia J. A systematic review and meta-analysis of dietary patterns and depression in community-dwelling adults. The American Journal of Clinical Nutrition. 2013;99(1):181-197. DOI: 10.3945/ajcn.113.069880.
10	Psaltopoulou T, Sergentanis T, Panagiotakos D, Sergentanis I, Kosti R, Scarmeas N. Mediterranean diet, stroke, cognitive impairment, and depression: A meta-analysis. Annals of Neurology. 2013;74(4):580-591. DOI: 10.1002/ana.23944.
11	Lopez-Garcia E, Schulze M, Fung T, Meigs J, Rifai N, Manson J et al. Major dietary patterns are related to plasma concentrations of markers of inflammation and endothelial dysfunction. The American Journal of Clinical Nutrition. 2004;80(4):1029-1035. https://doi.org/10.1093/ajcn/80.4.1029
12	Fung T, Rimm E, Spiegelman D, Rifai N, Tofler G, Willett W et al. Association between dietary patterns and plasma biomarkers of obesity and cardiovascular disease risk. The American Journal of Clinical Nutrition. 2001;73(1):61-67. doi: 10.1093/ajcn/73.1.61. PMID: 11124751.
13	Chrysohoou C, Panagiotakos D, Pitsavos C, Das U, Stefanadis C. Adherence to the Mediterranean diet attenuates inflammation and coagulation process in healthy adults. Journal of the American College of Cardiology. 2004;44(1):152-158. doi: 10.1016/j.jacc.2004.03.039. PMID: 15234425.
14	Berk M, Williams L, Jacka F, O'Neil A, Pasco J, Moylan S et al. So, depression is an inflammatory disease, but where does the inflammation come from? BMC Medicine. 2013;11(1). https://doi.org/10.1186/1741-7015-11-200
15	Pasco J, Nicholson G, Williams L, Jacka F, Henry M, Kotowicz M et al. Association of high-sensitivity C-reactive protein with de novo major depression. British Journal of Psychiatry. 2010;197(5):372-377.
16	Aleksandrova K, Koelman L, Rodrigues C. Dietary patterns and biomarkers of oxidative stress and inflammation: A systematic review of observational and intervention studies. Redox Biology. 2021;42:101869. https://doi.org/10.1016/j.redox.2021.101869.

17	Liu S, Manson J, Buring J, Stampfer M, Willett W, Ridker P. Relation between a diet with a high glycemic load and plasma concentrations of high-sensitivity C-reactive protein in middle-aged women. The American Journal of Clinical Nutrition. 2002;75(3):492-498.
18	Penckofer S, Quinn L, Byrn M, Ferrans C, Miller M, Strange P. Does Glycemic Variability Impact Mood and Quality of Life? Diabetes Technology & Therapeutics. 2012;14(4):303-310. doi: 10.1089/dia.2011.0191.
19	Knüppel A, Shipley M, Llewellyn C, Brunner E. Sugar intake from sweet food and beverages, common mental disorder and depression: prospective findings from the Whitehall II study. Scientific Reports. 2017;7(1). https://doi.org/10.1038/s41598-017-05649-7
20	Micha R, Rogers P, Nelson M. Glycaemic index and glycaemic load of breakfast predict cognitive function and mood in school children: a randomised controlled trial. British Journal of Nutrition. 2011;106(10):1552-1561. doi: 10.1017/S0007114511002303.
21	Palmer S, McLean R, Ellis P, Harrison-Woolrych M. Life-Threatening Clozapine-Induced Gastrointestinal Hypomotility. The Journal of Clinical Psychiatry. 2008;69(5):759-768.
22	Pelizza L, De Luca P, La Pasa M, Borella D. Clozapine-induced intestinal occlusion: a serious side effect. Acta Biomedica. 2007;78(2):144-148.
23	Berding K, Vlckova K, Marx W, Schellekens H, Stanton C, Clarke G et al. Diet and the Microbiota–Gut–Brain Axis: Sowing the Seeds of Good Mental Health. Advances in Nutrition. 2021;12(4):1239-1285. doi: 10.1093/advances/nmaa181.
24	Dawson S, Dash S, Jacka F. The importance of diet and gut health to the treatment and prevention of mental disorders. International Review of Neurobiology. 2016;131:325-346 doi: 10.1016/bs.irn.2016.08.009.
25	Benton D, Young H. Do small differences in hydration status affect mood and mental performance? Nutrition Reviews. 2015;73(suppl 2):83-96.https://doi.org/10.1093/nutrit/nuv045
26	Adan A. Cognitive Performance and Dehydration. Journal of the American College of Nutrition. 2012;31(2):71-78. doi: 10.1080/07315724.2012.10720011. PMID: 22855911.
27	Muñoz C, Johnson E, McKenzie A, Guelinckx I, Graverholt G, Casa D et al. Habitual total water intake and dimensions of mood in healthy young women. Appetite. 2015;92:81-86. doi: 10.1016/j.appet.2015.05.002.
28	Australian and New Zealand Nutrient Reference Values for Sodium. A report prepared for the Australian Government Department of Health and the New Zealand Ministry of Health, 2017 https://www.nrv.gov.au/sites/default/files/content/resources/2017%20ANZ%20NRVs%20for%20Sodium%20%28containing%20recommendations%29.pdf
29	Eat for Health - Australian Dietary Guidelines. Providing the scientific evidence for healthier Australian diets, 2013.NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/adg
30	Nutrition Care Manual [Internet]. Nutritioncaremanual.org. 2022 [cited 15 August 2022]. Available from: https://www.nutritioncaremanual.org/
31	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Vitamin C**. https://www.nrv.gov.au/nutrients/vitamin-c
32	Vitamin C factsheet for health professionals – March 2021, National Institute of Health, Office of Dietary Supplements, US. [Internet]. Ods.od.nih.gov. 2022 [cited 15 August 2022]. Available from: https://ods.od.nih.gov/factsheets/VitaminC-HealthProfessional/
33	McKillop D, Pentieva K, Daly D, McPartlin J, Hughes J, Strain J et al. The effect of different cooking methods on folate retention in various foods that are amongst the major contributors to folate intake in the UK diet. British Journal of Nutrition. 2002;88(6):681-688.

34	National Health and Medical Research Council, Nutrient Reference Values for Australia and New Zealand. 2006, Department of Health and Ageing. **Zinc**. https://www.nrv.gov.au/nutrients/zinc
35	Lai J, Moxey A, Nowak G, Vashum K, Bailey K, McEvoy M. The efficacy of zinc supplementation in depression: Systematic review of randomised controlled trials. Journal of Affective Disorders. 2012;136(1-2): e31-e39. DOI: https://doi. org/10.1016/j.jad.2011.06.022.

Mental Health Inpatients | Menu Choices:

Key changes to this section include:

- Design the menu choice standards so they can be used as compliance criteria for auditing
- Include more guidance around menu design
- Managing the needs of long stay patients
- Additional menu design standards for mental health facilities including mid-meal

Menu Choice – Offering variety and opportunity.

"*To meet the nutrient requirements essential for good health, you need to eat a variety from each of the five food groups daily, in the recommended amounts. It is not necessary to eat from each food group at every meal. In fact, in some instances, you only need to eat some of the foods in each food group a couple of times a week. "(1) "It is also important to enjoy a variety of foods within each of the Five Food Groups because different foods vary in the amount of the key nutrients that they provide.* "(1)

https://www.eatforhealth.gov.au/food-essentials/five-food-groups

Choice is a key factor affecting food intake and satisfaction. (2) Providing guidance around the minimum frequency in which food groups should be offered, and guidance around the range of variety, improves the consumers range of choice, and can help prevent menu fatigue. It also helps to ensure patients are provided with a range of foods consistent with the core food group recommendations, (1) promotes consistency of service provision across the State, and equity of access.

Menu choice standards are comprised of three components:

- Minimum choices
- Minimum standard serve
- Menu design standards (global standards, and also menu item targetted standards)

Minimum choices outline quantified targets which provide the ability to benchmark the suitability of a hospital menu from a variety and choice perspective. Facilities are encouraged to extend the meal service and offer additional choices. The actual number of main meals and menu patterns are not specified, to allow flexibility in service delivery models, menu planning and implementation.

Minimum standard serves provides a guide around serving sizes for menu items. These take into consideration food industry norms which influence the packaging size of portion controlled products, and the minimum serve size acceptable to the patient.

Menu design standards are recommended actions that will guide the development of a menu which has good variety within meals and across the menu cycle.

Collectively, menu choice standards guide the provision of maximum opportunity for patients/consumers /residents to choose at least the minimum number of serves from each of the core food groups, at mealtimes they prefer, from a menu which is consistent with the overarching principles of the standards.

A unique consideration when designing menus for consumers in inpatient mental health facilities is the vast variation in length of stay of some consumers. Consumers may be admitted for a shorter length of stay to manage an acute presentation, or they may have a long length of stay which ranges from months to years

in duration. As a result, the menu needs to be designed with a high variety of choice to prevent menu fatigue in these consumers.

Application Tip:
When assessing a menu against the Menu Choice, the objective is that the menu complies to the criteria outlined in the Minimum Choices, Minimum Standard Serve and the Menu Design Standards columns.

Menu Choice Standards

Designing a menu to promote variety and opportunity for choice.

Menu Design Standards
These menu design standards support the design of a menu which prioritises the needs and preferences of the consumer. *These standards apply in all instances where there is a cohort of mental health inpatient consumers and where an inpatient meal service model is provided. This may include mental health wards / units within acute health care facilities or standalone mental health facilities. Strategies used to operationalise the standards may vary based on the setting.*
Menu Planning and Design: • The menu offers the opportunity for the consumer to access, at a minimum, three main meals and two to three midmeals each day. This can be provided using varied food service delivery models. • The menu cycle length demonstrates it has been guided by the length of stay of the consumers with recognition that consumers with long length of stay may require a longer menu cycle length, and inclusion of more variety. • The menu demonstrates menu design qualities such as variation in ingredients, preparation styles, flavours, textures, cultural representations, and that repetition is considered and limited to avoid repetition of items at consecutive meals or on consecutive days. The exception to this may be if the menu is a static style menu, or if the items are popular and preferred items. • The menu demonstrates variety across all menu components – including hot mains, sandwiches, salads, and desserts. • The menu design demonstrates consideration of religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting. • The menu design demonstrates consideration of the variations of length of stay and cohorts of consumers in their facility / unit (E.g., adolescent cohorts, psycho-geriatrics etc.). • The menu design demonstrates cultural diversity, not just in the selection of main meal items, but also condiments and meal accompaniments. • The menu design offers minimally processed foods at each meal and snack, and offers a fresh food choice at each mealtime. • The menu design of default selections of a standard diet for the different age groups meets the nutrient goal standards but not necessarilly all menu choice standards. **Length of Stay Considerations:** *For short length of stay admissions:* • Where a facility is interested in a shorter stay menu – for particular services such as mental health assessment or short stay units, it may be viable to have a cohort menu with alternative design (shorter

cycle of reduced choice). This could be managed as an operational menu / therapeutic type menu which sits outside of the standards. If this strategy is adopted, the facility must provide rationale for the short stay menu, such as the average length of stay for the chosen cohort being 3 days or less and have processes in place to ensure high nutritional risk and longer stay patients are provided with additional options.

Menu Review:

- A framework exists which outlines how often the menu will be reviewed, with a scheduled full menu review activity conducted at least every 2 years.
- A component review / product interchange (for example, based on seasonal availability) is scheduled at least twice a year.
- A menu review must demonstrate consideration of the consumer needs and preferences of the consumers of the health facility. This includes the religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting.
- A menu review must demonstrate engagement and input from key stakeholders including, but not limited to, food service representatives, mental health services, clinical / mental health dietitian representatives, and consumers and residents or their carers, of the mental health facility.
- An assessment of the compliance of the menu to the nutrition standards should be completed every 2 years to assist in informing considerations for the menu review.

Meal Events and Self-Catering Opportunities:

- Menu design includes alternative meal provision opportunities to increase menu variety. These may include meal events (e.g., BBQ, picnic, takeaway night) or self-catering opportunities (e.g., when consumers are engaged in food preparation.)
- A local framework exists which guides the choices made available for meal events and self-catering occasions. Food choices for meal events, and self-catering meals where the food choices are made by the consumer, prepared by the consumer, and funded by the facility / unit, are not in the scope of the nutrition standards. It is recommended to follow the *'Healthy food and drink in NSW health facilities for staff and visitor's framework'* (3). If food choices for self-catering occasions are supplied and funded by the facility food service provider, or if they are selected and supplied by the facility / unit for preparation by the consumer, these self-catering meals are in the scope of the nutrition standards.

Mid-meal Opportunities:

- Where a midmeal service is not provided, a structured protocol is implemented where at predetermined times midmeal options are made available for self-selection by consumers. The operationalisation of this can be determined by the needs of the facility.
- When midmeals are offered, there needs to be a range of items provided. This includes a fruit option and, as appropriate for the nutritional needs of the consumers, a high energy/ high protein item / lower energy option.

Caffeine:

- Caffeine is not a nutrient, but a drug with drug-nutrient interactions which need to be considered in in mental health consumers. Facilities can determine the level of access to caffeinated beverages available on their menu.
- A facility has the option to choose not to serve caffeinated or decaffeinated equivalents.

Menu Item Specific - Menu Choice Standards

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
Fruit *Fresh or canned or stewed, dried*	• 1 option at each main meal • 1 option at each mid meal	150 g fresh fruit (1 medium piece, 2 small pieces or 5 prunes) or 120g serve canned fruit	• A variety of fruit is offered including full pieces, canned options and cut up options.
Juice	• 1 option per day – at one main meal	100mL	
Cereal – hot	• 1 option per breakfast meal	150 - 180g cooked weight	
Cereal – cold	• 4 options per breakfast meal	Portion packs where available or 30g serve	
Breakfast - Protein *Continental or Cooked service*	• 1 option per breakfast meal (providing a min 5g of protein)	100-150g yoghurt, or 1 egg, or 20g cheese, or 110g baked beans	• Other low-protein options, such as spaghetti, tomato, and mushrooms, can be offered as optional additions.
Bread	• 2 options per main meal	1 slice 1 roll (30g)	• A variety of bread is offered including high fibre white and either whole meal, wholegrain or multigrain.
Margarine and Butter	• 1 margarine option at each main meal. (1 portion to be used for 2 slices of bread)	Not less than 7g	• Butter may also be offered (optional)
Spreads	• 3 options per breakfast meal	Portion control packs where available	• At least 3 varieties are offered each day. E.g., Jams, marmalade, honey, and vegemite. • Other items such as peanut butter or low joule spreads are optional.
Cold beverages *Milk and other options*	• 2 milk options at each main meal and mid-meal • Water offered at all main and mid meals. • Other drinks optional	150mL	• Full cream and reduced fat milk are offered at each meal. • Soy milk to be available on request. • Flavoured milk optional. • Cordial and soft drinks optional. but must not be included as part of a default

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
			meal or midmeal. Low joule options are available as alternatives.
Hot beverages	• Hot beverages are offered at 4 meal occasions per day	150mL 15mL milk for hot beverage	• More than one variety of hot beverage are offered over the day • Decaffeinated beverages are available as alternatives. Menu planning may determine when offered.
Sugar and Sugar substitute	• 1 of each option – at meals when hot beverage or cereal served.	Portion control packs	• Offered as an option with cereals. • Offered as an option with hot beverages.
Soup	• 1 option – Band 1 – at 1 main meal occasion per day • Any additional soups offered can be any Band.	180mL	• An option of a small serve size is available (where possible).
Hot choice (main) *Meat / fish / poultry / vegetarian*	• 2 options at 2 main meals occasions per day (4 options per day) - 1 option per meal – must be Band 1 or Band 2 – Meat / Poultry / Fish - 1 option per meal – any band Meat / Poultry / Fish or Band 1 Vegetarian - Optional: 1 unbanded option / comfort food choice.	As determined in bands.	• At least 1 hot choice per day must be red meat. This is excepted if red meat is offered in a main salad or sandwich on that day. • A variety of meat options are offered at consecutive main meals. • 1 hot choice per day is a vegetarian option. This is excepted if a vegetarian main salad or sandwich is offered as an alternative. • *Note: Future goal is to move towards a minimum of 1 vegetarian main meal option per day as part of the main meal options.* • 1 comfort food option / non nutrition focused options can be included as a choice per meal, but it must be in addition to the minimum

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
			number of banded options. • An option of a small, standard or large serve size for hot main options is available. (Unless constrained by the nature of the item. E.g., pre-packed meal, single serve item.) • Protein and energy fortified options are available for those with small appetites.
Potato, rice, pasta and others*	• 2 options at each meal offering main hot choices.	80-120g	• An alternative to potato is offered at least once per day. • Rice or pasta is offered when it would be a typical accompaniment with a meal. • Recipe based dishes must comply to the sodium and saturated fat limits stated in the nutrient goal standards. • An option of a small, standard or large serve size is available. (Unless constrained by the nature of the item. E.g., pre-packed meal, single serve item.) • Protein and energy fortified options are available for those with small appetites.
Vegetables, including side salads.	• 2 options at each meal offering main hot choices. • 1 option per day may be a Band 3 side salad. • Soups containing a significant amount of vegetable / serve can contribute to vegetable options.	70g per vegetable portion	• At least 1 red / orange vegetable is offered per day. • At least 1 one green vegetable is offered per day. • An option of a small, standard or large serve size for vegetables is available.
Sandwich	• 1 option – Band 1 – at 2 main meals per day.	2 slices of bread	• At least 1 sandwich option made with whole meal or multigrain bread is offered per day. • 1 sandwich per day is a vegetarian option. This is

Menu item	Minimum choices – variety and frequency	Minimum standard serve	Menu Design Standards
			excepted if a vegetarian hot choice or main salad is offered as an alternative. • Varied serve size options are available including ½ sandwich, full sandwich and 1 ½ sandwich.
Salad – as a main meal	• 1 option – Band 1 or Band 2 – at 1 main meal per day.	Minimum of 4 different vegetables with minimum total weight of 90g	• Portion control salad dressings are offered. • An option of a small, standard or large serve size for main salads is available. (Where practicable.)
Condiments	• May be offered or available on request.	Portion control pack	• A range of condiment options to be available. E.g., Tomato sauce, mayonnaise • Salt sachets are available.
Desserts	• 2 options at each at main meal • 1 option must be Band 1		
Nutrient dense snacks *(high energy / high protein)*	Where nutrient dense snacks are required, the following applies: • 2 options at 1 mid meal occasion per day	Portion control packs	• At least two different nutrient dense snacks options should be available each day. (>500kJ per serve and at least one with >3g protein). Snacks can address both high energy and high protein • Range should include both savoury and sweet options.
Other snacks	• 2 options at each mid meal per day	Portion control packs	• At least two different lower energy, nutritious snacks options should be available each day. (<400kJ per serve) • Range should include both savoury and sweet options.

* This menu group category includes, but is not limited to noodles, cous cous, and other grains. Bread is excluded as it is included in a separate menu group category.

Sample Minimum Choice Template

The number indicates the minimum number of choices for that group offered on the menu. These provide the opportunity for the patient to choose items at the mealtime. E.g.: Spreads – 3 indicates that 3 choices of spreads are to be offered at that meal. +/- indicates an optional choice to offer.

	Breakfast	Midmeal - AM	Lunch	Midmeal - PM	Dinner	Midmeal - Supper
Fruit	Fruit - 1	Fruit - 1	Fruit - 1	Fruit - 1	Fruit - 1	
Juice	Juice - 1					
Cereal - hot	Hot cereal - 1					
Cereal - cold	Cold cereal - 4					
Breakfast – Protein	Protein source - 1					
Bread	Bread – 2 (White / wholemeal)		Bread – 2 (White / mulitgrain)		Bread – 2 (White / wholemeal)	
Margarine & Butter	Margarine – 1 +/- Butter - 1		Margarine – 1 +/- Butter - 1		Margarine – 1 +/- Butter - 1	
Spreads	Spreads - 3					
Cold beverages	Plain Milk – 2 (Full fat / reduced fat) +/- Other options -1	Plain Milk – 2 (Full fat / reduced fat) +/- Other options -1	Plain Milk – 2 (Full fat / reduced fat) +/- Other options -1	Plain Milk – 2 (Full fat / reduced fat) +/- Other options -1	Plain Milk – 2 (Full fat / reduced fat) +/- Other options -1	Plain Milk – 2 (Full fat / reduced fat) +/- Other options -1
Hot beverages	Hot beverage – 1 (Tea)	Hot beverage – 1 (Decaf Coffee)		Hot beverage – 1 (Tea)		Hot beverage – 1 (Tea)
Sugar /substitute	Sugar – 1 Substitute – 1	Sugar – 1 Substitute – 1		Sugar – 1 Substitute – 1		Sugar – 1 Substitute – 1
Soup			Soup – Band 1 - 1			

Hot choice			Hot – Red Meat – 1 (Band 1) Hot – Fish – 1 (any band)		Hot – Poultry – 1 (any band) Hot – Vegetarian – 1 (Band 1) +/- Comfort food – 1 (unbanded)	
Potato, rice, pasta and others*			Potato – 1 Rice - 1		Potato – 1 Pasta - 1	
Vegetables, including side salads			Vege – Orange – 1 Vege – Any colour - 1		Vege – Green – 1 Vege – Side salad - 1	
Sandwich			Sandwich - white – Band 1 - 1		Sandwich – w/meal (salad) – 1 (Band 1)	
Salad – main			Salad main – 1 (Band 1)			
Condiments	Condiment options / salt sachet availble on request.		Condiment options / salt sachet availble on request.		Condiment options / salt sachet availble on request.	
Desserts			Dessert – 1 (Band 2)		Dessert – 1 (Band 1)	
Nutrient dense snack (If required)		Nutrient dense snack - 2				
Other snacks		Other snack – 2		Other snack – 2		Other snack – 2

Note: The above is a sample template and not a prescribed model.

References [Will be relocated to References page]

1	The Five Food Groups [Internet]. eatforhealth.gov.au. 2015 [cited 11 March 2022]. Available from: https://www.eatforhealth.gov.au/food-essentials/five-food-groups
2	do Rosario V, Walton K. Hospital Food Service [Internet]. 2019 [cited 28 March 2022]. Available from: https://www.researchgate.net/publication/343494490_Hospital_Food_Service doi: 10.1007/978-3-319-75388-1_74-1.
3	NSW Ministry of Health Centre for Population Health. Healthy food and drink in NSW health facilities for staff and visitor's framework. North Sydney: NSW Health; 2017.

Metal Health Inpatients | Special Considerations:

Special Considerations for Consumers in a Mental Health facility.

People admitted to mental health facilities represent a diverse population. Mental health diagnoses may include psychotic disorders, major affective disorders, other mental health issues, substance misuse, eating disorders, mood disorders, physical health problems and behavioural disturbances. Additionally, some people may have other coexisting physical health problems and/or an intellectual disability, and/ or be affected by trauma.

Nutritional Considerations in Menu Planning

As part of their mental illness presentation, or the treatment of the illness, there can be impacts on the nutritional status of the consumer. These consumers are often at greater risk of obesity and chronic disease including cardiovascular disease, type 2 diabetes, and cancer. (1,2) This can be due to the interaction between the mental illness itself, food choices, medications, lifestyle behaviours, alteration in cognitive function, behavioural problems and poor social determinants.

Consequently, menu design for mental health consumers should be modelled on general healthy eating principles which is targeting the minimisation of nutrition related risks associated to chronic disease. The menu design in mental health facilities should be predominantly less energy dense, with a focus on offering higher satiating food choices, and offering additional low energy snacks. The principles of a Mediterranean diet form a good basis for menu design and have been associated with the improvement of cardiovascular parameters and also depressive symptoms. (3) Menu choices should also consider the appropriateness of inclusion of alcohol and caffeine as ingredients in meal choices.

Food Service Delivery Considerations.

In mental health facilities, consideration of the meal service / food service delivery is also important as these can help support eating behaviours. The model design needs to be based on an individual site assessment and consider the needs of the population.

Particular aspects of the food service model that warrant consideration include:

- processes to allow access to nutritious food and fluid out of hours. This will support consumers who are at risk of missing meals due to being unwell or due to extended sleeping hours.
- processes to access appropriate additional snacks in between meals. This will support consumers with increased appetite who need to eat additional food more frequently.
- meal plating considerations and the presentation needs of served foods. For example, some consumers have a requirement for foods not to be touching each other.
- safety considerations around the provision of cutlery and therefore menu planning may need greater inclusion of finger foods.
- collaborative arrangements between food service staff and clinical staff in the provision of supervision of mealtime behaviours.

Some specific nutritional needs cannot be fully satisfied by the standard inpatient menu. In these instances, the facility must offer the opportunity for the patient to be transitioned to a diet targeting their specific needs.

These diets include therapeutic diets, operational diets or diets for religion / culture / lifestyle / life stage. The composition and design of these diets are guided by the ACI Diet Specifications .

Population Considerations

In addition to the above-mentioned nutritional considerations when designing a menu, it is an essential requirement for facilities to understand the demographics and needs of their patient population so that the food service model and menu can be appropriately planned.

There are five main population groups within the mental health cohort who may require specific menu design considerations.

These include:

- General Mental health – which include short and long stay and rehabilitation
- Psycho-geriatrics units
- Adolescent units
- Eating disorder units
- Women and baby units

General Mental Health

The length of stay in mental health facilities, or units, can vary between days and even months and years. Menu fatigue is a common risk, for long stay, and in particular very long stay patients. Reduced intake is often a consequence which further impacts nutrition risk. Malnutrition is more prevalent in patients with longer lengths of stay. (4-7) The completion of nutrition screening of these patients will guide in determining if these patients are at nutritional risk (8). If nutritional screening indicates the need for a therapeutic diet, this should be ordered.

Menus must meet the goals for all nutrients and provide a range of dishes that are popular and likely to be eaten. An appropriate menu cycle (of greater than one week) must be in place to prevent menu fatigue, and regular menu reviews must be scheduled.

Patients require the opportunity of extended choice and provision of additional options when they have been an inpatient for an extended length of stay. The menu design standards may guide in strategies to manage this. Additional opportunities to provide variety to the menu can include barbecue days, cooking classes and even inclusion of a range of commercial products, or online vendors, which are not commonly included on the menu.

Our consumers in NSW Health inpatient mental health facilities:*

The average length of stay for all admissions is 18.7 days.

46.5 % of the episodes were for 8+ days and the median age of the consumer was 40.3 years old.

If the consumer remained admitted for more than 8 days, their average length of stay was 36.5 days.

If the consumer remained admitted for more than 21 days, their average length of stay ranged from 46.8 – 74.4 days depending on their age group.

* Mental Health inpatients in the 5 years 2015/16 to 2019/20.

For consumers who stay for shorter durations, it should not be assumed that short stay patients are not at nutritional risk. Some short stay patients may have history of frequent short stay readmissions due to the nature of their illness. Other short stay patients may have become at nutritional risk prior to their short stay admission. The completion of nutrition screening of these patients will guide in determining if these patients

are at nutritional risk (8). If nutritional screening indicates the need for a therapeutic diet, this should be ordered.

When determining the needs of the consumers of the mental health facility, it may be identified that some patient cohorts are consistently a short length of stay and are also most commonly screened as low nutritional risk (e.g., mental health assessment units). Such cohort groups may be better suited to planning a reduced choice menu.

Our consumers in NSW Health inpatient mental health facilities:*
32.5% of the episodes had a length of stay of 1-3 days with the average length of stay being 1.8 days.
21.0% of the episodes had a length of stay of 4-7 days with the average length of stay being 5.3 days.

* Mental Health inpatients in the 5 years 2015/16 to 2019/20.

Psycho-geriatric Units

Consumers in psycho-geriatric units may have increased nutritional needs, or present with conditions which impact their ability to eat and drink. (eg, cognitive impairement such as dementia).

Menu design needs to incorporate strategies to support intake of preferred and energy and protein dense options. These may include variations in serve sizes – including energy / protein fortification of small serves, varied presentation modalities (e.g., finger food and plated meals), and inclusion of familiar meal choices.

If the patient is identified with a particular clinical need an appropriate therapeutic diet may be indicated to better support their nutritional requirements. The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications.

Adolescent Units

Consumers in adolsecent units may have increased nutritional needs related to their stage of development. Menu design needs to incorporate strategies to support intake of preferred and energy and protein dense options. These may include variations in serve sizes -including larger serves, and inclusion of familiar and preferred meal choices.

If the patient is identified with a particular clinical need an appropriate therapeutic diet may be indicated to better support their nutritional requirements. The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications.

Eating Disorder Units

Consumers in eating disorder units have very particular therapeutic menu planning and food service delivery needs which must be considered.

Menu planning needs to include oopportunities to access other food options which may differ to the standard menu, and which are based on individualised meal plans designed by a Dietitian.

The food service delivery model needs to be designed with clinical input and knowledge of the guidelines outlining best practice assessment and treatment of eating disorders in NSW including:

- NSW Eating Disorders Toolkit (9)
- Guidelines for the Inpatient Management of Adult Eating Disorders in General Medical and Psychiatric Settings in NSW (10)
- NSW Service Plan for People with Eating Disorders 2021-2025 (11)

Women and Baby Units

Menu planning for consumers in women and baby units is more complex as the planning needs to accommodate meal provision for the mother, +/- their partner, and also the baby (generally 0-12 months old).

If the mother is lactating, she will have increased nutritional needs for energy, protein, fats, fibre, fluid, and most micronutrients (12,13). The menu must support the ability to meet these increased requirements.

The menu planning also needs to accommodate the developmental nutritional needs of the baby.

The ordering of the paediatric developmental diets may be indicated to support their nutritional requirements. The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

The food service delivery model also needs to be designed to provide flexible mealtime access, and access to additional foods and fluids as the care needs of the baby may reduce availability to consume meals at the scheduled times.

[From here on content replicates the adult standards, this will be hyperlinked]

Patients requiring a therapeutic diet.

Therapeutic diets are those which have modified nutrient goals and specifications / controls around foods, for the purpose of being used as part of medical therapy. They are available for use when the standard diet is not designed to meet the therapeutic goal of the diet.

Therapeutic diets are most appropriate for use for patients requiring:

- Allergy diets
- Nutrient modified diets
- Procedural or test diets
- Texture modified diets

Therapeutic diets must comply to the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets, they will be able to meet the nutrition goals and menu choice standards while others may be limited due to the nutrient composition or modifications in the diet.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Patients requiring a diet to meet their religion or culture / lifestyle / life stage choice:

Diets for Religion or Culture

Some religions or cultural practices involve adherence to particular dietary restrictions or practices. It is important that a health facility is familiar with the religious and cultural requirements of their patient population, and that the food preferences are incorporated into the menu design. This may allow patient to meet their dietary restrictions from the standard menu.

There is also the opportunity to transition to a religious diet if additional food options / additional requirements or restrictions are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

Vegetarian and vegans

Vegetarian / plant-based diets are becoming preferred for personal, religious, cultural or sustainability reasons. Vegetarian diets can be nutritious but there are some additional considerations needed when planning a menu.

The standard menu will have available a range of plant based / vegetarian choices available to select from each day. This will include meat and dairy substitutes. Nutrients at risk in this patient group include iron, zinc, calcium, omega 3 fats, vitamin B12 and vitamin D. (14) Options will be available on the menu to meet these requirements. To improve iron absorption, the menu should offer a good source of vitamin C at each meal, e.g., fruit juice or salad.

There is the opportunity to transition to a Vegetarian or Vegan diet if additional food options are required. These diets must still meet the nutrition goal standards and strive to meet the menu choice standards.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications.

Patients requiring an Operational Diet

Operational diets are those designed with modifications to the menu choices with the intent to support patient consumption. They are available for use when the standard diet is not meeting specific need of a patient.

Operational diets are most appropriate for use for patients requiring modified serving sizes, modified presentation (e.g., finger food) or modified texture for a non-therapeutic reason (e.g., cut up).

Operational diets must comply to the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets some will be able to meet the nutrition goals and menu choice standards while others may be limited due to the composition or modifications in the diet.

The appropriate diet can be ordered via the facilities diet ordering system. The composition and design of the diet will then be guided by the ACI Diet Specifications

References: [Will be relocated to References page]

1.	NSW Ministry of Health, Mental Health Branch. Physical Health Care for People Living with Mental Health Issues. A guideline. St Leonards: NSW Ministry of Health; 2021. Available at: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/GL2021_006.pdf
2.	National Mental Health Commission. Equally Well Consensus Statement: Improving the physical health and wellbeing of people living with mental illness in Australia. Sydney: National Mental Health Commission; 2016. Available at: https://www.equallywell.org.au/wp-content/uploads/2018/12/Equally-Well-National-Consensus-Booklet-47537.pdf
3.	Ventriglio A, Sancassiani F, Contu M, Latorre M, Di Slavatore M, Fornaro M et al. Mediterranean Diet and its Benefits on Health and Mental Health: A Literature Review. Clinical Practice & Epidemiology in Mental Health. 2020;16(1):156-164. doi: 10.2174/1745017902016010156.
4	NSW Health Policy - Nutrition Care PD2017_041 [Internet]. NSW Health Policy. 2017 [cited 21 March 2022]. Available from: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_041.pdf
5	do Rosario V, Walton K. Hospital Food Service [Internet]. 2019 [cited 28 March 2022]. Available from: https://www.researchgate.net/publication/343494490_Hospital_Food_Service doi: 10.1007/978-3-319-75388-1_74-1.
6	Barker L, Gout B, Crowe T. Hospital Malnutrition: Prevalence, Identification and Impact on Patients and the Healthcare System. International Journal of Environmental Research and Public Health. 2011;8(2):514-527.
7	Australian Commission on Safety and Quality in Health Care. Hospital Acquired Complication - Malnutrition. Australian Commission on Safety and Quality in Health Care; 2018 p. 1-10. Available at: https://www.safetyandquality.gov.au/sites/default/files/migrated/SAQ7730_HAC_Malnutrition_Long V2.pdf
8	NSW Health Policy - Nutrition Care PD2017_041 [Internet]. NSW Health Policy. 2017 [cited 21 March 2022]. Available from: https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2017_041.pdf
9	NSW Ministry of Health. NSW Eating Disorders Toolkit. A practice-based Guide to the Inpatient management of Children and Adolescents with Eating Disorders. St Leonards: NNSW Ministry of Health; 2018. Available at: https://www.health.nsw.gov.au/mentalhealth/resources/Publications/nsw-eating-disorders-toolkit.pdf
10	NSW Ministry of Health. Guidelines for the Inpatient Management of Adult Eating Disorders in General Medical and Psychiatric Settings in NSW. North Sydney: NSW Ministry of Health; 2014. Available at: https://www.health.nsw.gov.au/mentalhealth/resources/Publications/inpatient-adult-eating-disorders.pdf
11	NSW Ministry of Health. NSW Service Plan for People with Eating Disorders 2021–2025. St Leonards: NSW Ministry of Health; 2021. Available at: https://insideoutinstitute.org.au/assets/nsw-service-plan-for-people-with-eating-disorders-2021-2025.pdf
12	Nutrient Reference Values for Australia and New Zealand Including Recommended Dietary Intakes, 2006, Upd 2017, NHMRC, Dept of Health and Ageing. https://www.nhmrc.gov.au/about-us/publications/nutrient-reference-values-australia-and-new-zealand-including-recommended-dietary-intakes
13	Diet and nutrition health advice - Pregnancy and breastfeeding [Internet]. Dietitians Australia. 2022 [cited 23 August 2022]. Available from: https://dietitiansaustralia.org.au/health-advice/pregnancy-and-breastfeeding
14	Diet and nutrition health advice – What is a vegetarian diet? [Internet]. Dietitians Australia. 2022 [cited 23 August 2022]. Available from: https://dietitiansaustralia.org.au/health-advice/vegetarian-diet

Mental Health Inpatients | Our Patients:

When planning a menu for your health facility, it must involve engagement with key stakeholders, and consider the demographics of your health facility population, their length of stay and the religious, cultural, lifestyle and life stage food preferences and requirements which are relevant to the needs of the consumers in the health setting. This will help inform decisions about the menu that is suitable for your facility.

When data was assessed for NSW Health facilities, over the 5 years 2015/16 to 2019/20, the following key findings were identified:

Key Facts – Mental Health Inpatients: [For display as infographics]

- Average LOS – all ages is 18.7 days. Median LOS – all ages is 7 days.
- 3 in 5 admissions are admitted for more than 3 days.
- Almost 1 in 2 admissions are more than 7 days.
- There is a 2-fold increase in LOS for those aged 65 years old and older.

Age Groupings of Admitted Mental Health Inpatients

Age Group (years)	Median Age (years)	Median LOS (days)	Average LOS (days)	% of Episodes
9-13	13.0	5	11.9	1.1%
14-18	17.1	5	12.4	9.0%
19-<65	37.3	6	17.8	81.7%
65-<75	69.2	18	37.6	4.7%
75-<85	79.6	20	36.3	2.2%
85+	88.0	16	31.7	1.1%
All ages	36.7	7	18.7	

*Represented data table excludes data for age <9year old which represented 0.2% of episodes, based on assumption these were data anomalies.

Length of Stay - Mental Health Admission

Length of Stay – all admissions

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-7 days	3.2	3	33.6	53.5%
8+ days	36.5	19	40.3	46.5%
All days	18.7	7	36.7	

LOS Group	Average LOS (days)	Median LOS (days)	Median Age (years)	% of Episodes
1-3 days	1.8	2	32.1	32.5%
4-7 days	5.3	5	35.4	21.0%
8+ days	36.5	19	40.3	46.5%
All days	18.7	7	36.7	

Length of Stay – Aged Grouped

LOS Group	Age Group (years)					
	9-13	14-18	19-<65	65-<75	75-<85	85+
	Average LOS (days)					
1-3 days	2.2	1.8	1.8	1.9	2.0	1.6
4-7 days	4.8	5.2	5.3	5.5	5.4	5.1
8-14 days	10.6	10.8	10.5	10.7	11.0	11.0
15-21 days	17.3	17.5	17.7	17.8	17.4	17.5
21+ days	46.8	54.6	64.7	74.4	65.7	65.3
All LOS	11.9	12.4	17.8	37.6	36.3	31.7

*Represented data table excludes data for age <9year old which represented 0.2% of episodes, based on assumption these were data anomalies.

LOS Group	Age Group (years)					
	9-13	14-18	19-<65	65-<75	75-<85	85+
	Average LOS (days)					
1-7 days	3.5	3.0	3.2	3.8	3.7	3.5
8+ days	24.0	29.6	35.4	50.7	45.2	42.5
All LOS	11.9	12.4	17.8	37.6	36.3	31.7

*Represented data table excludes data for age <9year old which represented 0.2% of episodes, based on assumption these were data anomalies.

Data Source Information:

Data source:

NSW Admitted Patient Data Collection (APDC) extracted from Hospital Performance Dataset (HoPeD) accessed via Secure Analytics for Population Health Research and Intelligence (SAPHaRI).

Data Scope:

Data collection period is 5 years: FY 2015/16 to 2019/20

Data includes all overnight hospital admissions from NSW public hospitals.

Total episodes: 32 044

Exclusions include:

- Same day admissions (admission and discharge dates are the same)

- Renal dialysis admission (regardless of length of stay)
- Newborn admissions
- Admissions from facilities other than hospitals (e.g., age care)
- Hospital in the home admissions

Definitions:

- Mental Health: Is care type, not location / facility type. This means that admissions may be in a mental health inpatient facility, mental health inpatient ward / unit, or in a general ward area.
- Psychogeriatric care type has been included in Mental Health care.
- Other care: Includes "Hospital Boarder" and "Other Admitted Patient Care". As defined in the admission data dictionary. "The principal clinical intent does not meet the criteria for any other category".

Caveat:

"Mental Health Care" as a care type was introduced in September 2016, with only gradual uptake in terminology use in the first year. Implementation was more stable since 2017 /2018 onwards. This means that mental health admissions may be underreported for periods prior to 2017.

Disclaimer:

- Content within this publication was accurate at the time of publication.
- This work is copyright. It may be reproduced in whole or part for study or training purposes subject to the inclusion of an acknowledgment of the source. It may not be reproduced for commercial usage or sale.
- Reproduction for purposes other than those indicated above requires written permission from the Agency for Clinical Innovation.
- The data is representative of the whole state and that it is important in menu design that the population data for the individual facility is considered.

Glossary:

Are there any other terms that need to be included in the glossary?

Term	Explanation / Definition
Choice	Choice is the act of choosing between two or more possibilities. (1) Choice in the context of meal choice relates to having options of food items (in the same menu items category) to choose from, but also the option of having access to food items at a time or frequency of you may like to choose / eat them, rather than being determined when you should have that option available to you. For instance, if fruit was offered only at breakfast, but not at lunch, you miss that choice of when you would like to consume fruit.
Default meal service	In NSW Health, we ideally want to offer the opportunity for consumers to select their choices from their menu for each meal. There will however be occasions when opportunity to select is not possible. A default meal is one where the menu selections have not been selected by a consumer. The choices instead have been auto selected by the system. A default meal can be provided for any meal in a day, or there may be occasions when they are provided for all meals. Default meals are available for all diet types. They will always be designed to be compliant with the consumers' diet order. Default meals, when planned over a full day, should meet the nutrition goal standards but may not always be consistent with the menu choice standards. The overarching principles of the standards will still apply. Occasions when a default meal service may apply include: - The patient is unable or unwilling to participate in menu selection. This may be due to illness or communication challenges, or the patient prefers to receive options selected by the system. - Operational reasons where the service is unable to offer patients an opportunity to select from a menu - The patient is on a non-select menu (may also be referred to as default diets) which intentionally does not provide the option for selection.
Non select menu *(may also be referred to as default diets)*	A menu which has been intentionally designed to be non-self-selective due to the therapeutic / restrictive nature of the diet. Often the range of menu choice is limited due to the restrictive nature of the diet, or the food / fluid items that the patient is required to receive are specifically prescribed, with no option for variation. Examples of diets which have non select menus include fluid diets, restricted nutrient diets, test diets, etc.
Standard diet *(may also be referred to as full diet)*	The diet is unmodified in nutrients, textures or range of suitable choices. The diet is designed to meet the overarching principles, nutrition goal standards and menu choice standards.

Therapeutic diet	Those diets which have modified nutrient goals and specifications / controls around foods suitable to be offered, for the purpose of being used as part of medical therapy. These diets and their composition are defined in the suite of ACI Diet Specifications. These diets may not be consistent with the nutrition goal standards or menu choice standards. The overarching principles of the standards will still apply.
Operational diet (Diets that support patient consumption.)	These diets may also be known as diets that support patient consumption. Those diets which are designed with modifications to the menu choices with the intent to support patient consumption. These diets and their composition are defined in the suite of ACI Diet Specifications. These diets should meet the nutrition goal standards but may not always be consistent with the menu choice standards. This is dependent on the intent of the diet. The overarching principles of the standards will still apply.
Diets for religion / culture / lifestyle / life stage choice	Those diets which are designed with modifications to the menu choices with the intent to meet religious, cultural or lifestyle preferences, or to meet the requirements of a particular life stage. These diets and their composition are defined in the suite of ACI Diet Specifications. These diets should meet the nutrition goal standards but may not always be consistent with the menu choice standards. The overarching principles of the standards will still apply.
Menu fatigue	When repeated menu items, or the repeated cycle of the menu, impose a monotony which can detrimentally affect a patient's appetite and desire to choose from the menu.
Minimally processed foods	Minimally processed foods have been altered in a minimal way to allow for preservation and storage. Their nutritional composition remains unchanged, and they are still largely recognisable as their unprocessed form. There is no added salt, sugar, oils or fats to the original foods. (2)
Small serve	A small serve is 50% of the standard serve size weight. For sandwiches, it is a half sandwich / or sandwich made with 1 slice of bread. Not all menu items can be offered as a small size. This includes pre-packaged items, or items which it is deemed operationally not practical to provide a small serve. These items need to be identified when planning the menu, with consideration given as to how a small serve option / alternative may be able to be accommodated.
Standard serve	The serve size for the menu item which complies to the minimum standard serve size in the menu choice standards, or which is defined in the bands for the relevant menu item groups.
Large serve	A large serve is 150% of the standard serve size weight. For sandwiches, it is one and a half sandwiches / or sandwich made with 3 slices of bread. Not all menu items can be offered as a large size. This includes pre-packaged items, or items which it is deemed operationally not practical to provide a large serve. These items need to be identified when planning the menu, with consideration given as to how a large serve option / alternative may be able to be accommodated.

References: [Will be relocated to References page**]**

[1]	choice_1 noun - Definition, pictures, pronunciation, and usage notes | Oxford Advanced Learner's Dictionary at OxfordLearnersDictionaries.com [Internet]. Oxfordlearnersdictionaries.com. 2022 [cited 15 August 2022]. Available from: https://www.oxfordlearnersdictionaries.com/definition/english/choice_1?q=choice
[2]	Food and Agriculture Organisation of the United Nations. Ultra-processed foods, diet quality, and health using the NOVA classification system. Rome; 2019.

Therapeutic Diet Specifications:

How the Nutrition Standards Apply to NSW Health Diets.

Nutrition Standards define the baseline food and nutrition needs of adult and paediatric inpatients and are used as the basis of menu design in NSW Health facilities. They will guide the design of a menu which will meet the defined nutrient goals of a hospitalised consumer, by the provision of opportunity for an inpatient to choose the minimum number of core food groups from a variety of choices. A menu designed on the guidance of the standards will meet the needs of most inpatients without the need to rely on therapeutic diets / enhanced diets to provide additional nutrition.

Diet Specifications give guidance about the type and quantities of suitable foods to be provided on specific diets including therapeutic diets, religious, cultural and lifestyle diets, life stage diets, operational diets, and standard diets. They are used to facilitate the development of menus for patients with special nutrition / food requirements. A uniform state-wide approach to diet specifications facilitates consistency, communication between health professionals and food service providers, and underpins recipe and menu development.

Diet Specifications provide targeted and topic specific detail around the nutritional considerations of specific diets. They outline:

- The aim of the diet
- The characteristics of the diet
- When the diet is indicated for use
- The overall nutritional adequacy of the diet
- Precautions that need to be considered when choosing the diet
- The suitability of the for use for paediatric patients
- Specific menu planning guidelines – including a description of foods allowed and not allowed on the diet.

All diets provided within NSW Health must comply with the overarching principles of the nutrition standards. It is acknowledged however that depending on the nature of some diets (therapeutic diets, religious, cultural and lifestyle diets, life stage diets, operational diets) some diets will be able to meet the standards while others may be limited due to the nutrient composition or modifications in the diet. For those that are unable to comply, an exemption for compliance may be endorsed by the ACI Diet Specifications Reference Group when documenting the specification for that diet and that reason for noncompliance must be documented on the diet specification for that diet. ACI Diet Specifications

Table 1 outlines the compliance matrix for the nutrition standards.

Table 1: Compliance Matrix

Diet Group	Nutrient goal standards compliance?	Menu choice standards compliance?	Comments
Standard Diets	MUST comply	MUST comply	
Religious / Cultural / Lifestyle Diets	MUST comply	Should comply. *	Some religious, cultural and lifestyle diets will be able to comply with the menu choice standards. If it is feasible, they must comply.
Supporting patient Consumption Diets (Operational diets)	MUST comply	Should comply. *	Some operational diets will be able to comply with the menu choice standards. If it is feasible, they must comply.
Life stage diets	MUST comply	Should comply. *	Some life stage diets will be able to comply with the menu choice standards. If it is feasible, they must comply.
Therapeutic diets	Should comply. *	Should comply. *	Some therapeutic diets will be able to comply with the nutrition goal and menu choice standards. For instance, High fibre, high soluble fibre, lower fat diets, fluid restriction diets. If it is feasible, they must comply.

Should comply. *

The nutrient composition or modifications in a diet may prevent their ability to comply with the standards. For those that are unable to comply, an exemption for compliance may be endorsed by the ACI Diet Specifications Reference Group when documenting the specification for that diet. The reason for non-compliance must be documented on the diet specification for that diet. ACI Diet Specifications

Diet Specifications

Diet Specifications give guidance about the type and quantities of suitable foods to be provided on specific diets including therapeutic diets, religious, cultural and lifestyle diets, life stage diets, operational diets, and standard diets. They are used to facilitate the development of menus for patients with special nutrition / food requirements. A uniform state-wide approach to diet specifications facilitates consistency, communication between health professionals and food service providers, and underpins recipe and menu development.

Diet Specifications provide targeted and topic specific detail around the nutritional considerations of specific diets. They outline:

- The aim of the diet

- The characteristics of the diet
- When the diet is indicated for use
- The overall nutritional adequacy of the diet
- Precautions that need to be considered when choosing the diet
- The suitability of the for use for paediatric patients
- Specific menu planning guidelines – including a description of foods allowed and not allowed on the diet.

Table 2: Diet Groupings Matrix

Standard Diets	**Therapeutic Diets**
Full	Allergy / Intolerance Diets
Religious / Cultural / Lifestyle Diets	Diabetic Diets
Halal	Drug Interaction Diets
Kosher	Energy Diets
Vegan	Enteral and Parenteral Diets
Vegetarian including milk and eggs	Fat Modified Diets
Vegetarian including milk but not eggs	Fibre Modified Diets
Vegetarian and seafood	Fluid Diets
Life Stage Diets	Paediatric Therapeutic Diets
Maternity	Post Procedure Diets
Breastfed and/or Infant formula fed alone	Protein Diets
Breastfed and/or Infant formula fed and Solids	Mineral / Electrolyte Diets
Infant first foods	Renal Diets
Infant 6 months+	Test Diets
Infant 7-12 months	Texture Modified Diets
1-3 years/Toddler	
Child 4-8 years	
Child 9-13 years	
Adolescent 14-18 years	
Diets Supporting Patient Consumption	
Large	
Small	
Finger Food	
Small meals – 6 / day	
No hot fluids	
Puree and bread - dental	
Minced and bread - dental	
Soft - dental	
Cut up	

The Bands:

Key changes to this section include:

- Bands are applied across the Standards
- Bands have been added for hot breakfasts, Pre-Packaged Meals – Whole Hot Main Meals - Meat / Poultry / Chicken, Pre-Packaged Meals – Whole Hot Main Meals – vegetarian
- Bands for vegetables have been removed, the relevant details have been included in the menu choices section

What are Bands?

The concept of 'bands' is a method of classifying menu components with respect to nutritional content and density. (1,2) They apply only to menu components that are recipe based. (Ie, they do not apply to single ingredient food items)

What is the purpose of bands?

Bands are designed to inform product purchasing or product / recipe design. They can provide manufacturers with a measurable nutritional outcome for their products. (1,2)

During menu design, the bands help with building a menu that meets patient nutrition goals. They can also be useful as a measurement tool during menu assessment.

What is difference between the bands?

All banded choices provide a source of nutrition. The difference is in the nutritional density of the menu item.

Band 1 are the most nutritionally dense (in particular, in their composition of protein and energy)

Band 2 allow for a level of nutritional density and variety, and

Band 3, where it occurs, are less nutritionally dense but allow for variety and inclusion of popular foods that are well received.

Some foods do not meet the nutritional criteria defined in the bands. These foods are known as unbanded items. There is still a place on the menu for unbanded foods, as they allow for inclusion of additional popular choice options which contribute to patient experience, and satisfy appetite. How often unbanded items are offered on a menu however needs to be managed, as there is a risk of them displacing the opportunity to have options of higher nutritional density.

A well designed menu would include a range of band 1, band 2, band 3 and unbanded items.

The Nutrition Standards include bands for the following meal components:

- hot breakfast dishes
- soup
- main dishes – meat based and vegetarian
- pre-packaged complete meals – meat based and vegetarian
- main salads
- sandwiches, wraps and rolls
- desserts

Within banded items, there is a tolerance +/-10% in both nutrient content and portion size to allow for variations in nutritional analysis and portion size.

It is an expectation of the Nutrition Standards that:

- Protein and energy nutrient goals need to be achieved daily.
- Micronutrient nutrient goals need be achieved when averaged over a week. This means, that it may not be necessary to meet micronutrient goals every day, if on some days in a 7 day period they may be exceeded.

Menu Group Bands

Hot Breakfast dishes

Band	Description	Portion size	Nutrients per portion size				Examples of typical compliant menu items
			Energy	Protein	Fat	Sodium	
1	Higher protein content	120g*	Min 700kJ	Min 15g	Max 25g	Max 25 mmol (575mg)	Egg dishes
2	Lower protein content	120g*	Min 700kJ	Min 8g	Max 25g	Max 25 mmol (575mg)	Spaghetti, baked beans.

*Cooked weight

Soup

Band	Description	Portion size	Nutrients per portion size				Examples of typical compliant menu items
			Energy	Protein	Fat	Sodium	
1	Significant nutrient value	180mL	Min 360kJ	Min 5g	Max 9g	Max 22mmol (506mg)	Minestrone, lentil, chicken and sweet corn, and pea and ham
2	Provides moderate energy but little other nutrients of any significant value. (Included for flavour and variety)	180mL	Min 180kJ	Min 2g	Max 9g	Max 27mmol (621mg)	Pumpkin, tomato, and potato and leek

Main dishes – Meat / poultry / fish

Band	Description	Portion size	Nutrients per portion size				Examples of typical compliant menu items
			Energy	Protein	Fat	Sodium	
1	Predominantly solid / single ingredient**	90-110g Fish (min 110g)			Max 10g	Max 7mmol (161mg)	Roast meats, chicken, fish
2	Combined dish with high meat content (animal protein is predominant source)	Min 120g cooked weight	Min 700kJ	Min 20g	Max 15g	Max 20mmol (460mg)	Examples include beef stroganoff, pork goulash, chicken and vegetable casserole, Moroccan lamb and

							cottage pie, crumbed fish
3	Combined dish with fairly even meat, vegetable and starch content	Min 150g cooked weight	Min 700kJ	Min 10g	Max 15g	Max 25mmol (575mg)	Salmon quiche and tuna mornay, stir fry, chicken risotto, noodle and other rice dishes.

** Refer to FSANZ definition of meat in Standard 2.2.1. [3] Does not include 'formed' meats or sausages, rissoles, meatloaf and crumbed fish/chicken or similar.

Main dishes (meat) do not include vegetables or starches (e.g., potato, rice and pasta) accompanying the main meal.

Sauces / gravies served with hot main dishes are expected to be not less than 40mL per serve but are not included in the nutrition analysis.

Main dishes – Vegetarian*

Band	Description	Portion size	Nutrients per portion size				Examples of typical compliant menu items
			Energy	Protein	Fat	Sodium	
1	Higher protein content	Min 120g cooked weight	Min 700kJ	Min 15g	Max 25g	Max 25mmol (575mg)	Macaroni and cheese, lentil and tofu curry and spinach and ricotta slice
2	Lower protein content	Min 120g cooked weight	Min 700kJ	Min 8g	Max 25g	Max 25mmol (575mg)	Vegetable moussaka, vegetable patty, and ravioli with tomato sauce

* Not necessarily suitable for vegan diets

Vegetarian dishes do not include vegetables or starches (e.g., potato, rice and pasta) accompanying the main meal. Portion sizes for vegetarian menu items will vary considerably.

Pre-Packaged Meals – Whole Hot Main Meals - Meat / Poultry / Chicken

Meals are a plated complete meal, served with a main meal item, starch option and vegetables.

Product Description	Main dish is predominantly solid / single ingredient**	Combined dish with high meat content (animal protein is predominant source)	Main dish has fairly even mix of meat & vegetables
Band	1	2	3
Total Cooked Weight	Min 320g	Min 350g	Min 380g
Main Dish Weight	Min 90g (meat/poultry) Min 110g (fish)	120g (entire main dish)	150g (entire main dish)
Sauces & Gravy	40mls		
Potato/Rice/Pasta	Min 90g	Min 90g	Min 90g***
Vegetables *	Min 140g 2 different options	Min 140g 2 different options	Min 140g*** 2 different options
Energy / Serve	Not specified	Min 990kJ	Min 990kJ
Protein / Serve	Not specified	Min 22g	Min 12g
Saturated Fat (/ 100g)	Max 3g	Max 3g	Max 3g
Sodium / Serve	Max 300mg	Max 505mg	Max 620mg

* Vegetables as accompaniment, excludes vegetables in main dish

** Refer to FSANZ definition of meat in Standard 2.2.1. [3] Does not include 'formed' meats or sausages, rissoles, meatloaf, and crumbed fish/chicken or similar.

***Potatoes /rice/ pasta and vegetables may be presented as a mixed dish, where the components are combined in presentation, e.g., Stir fry meat vegetables and noodles.

Pre-Packaged Meals – Whole Hot Main Meals - Vegetarian

Meals are a plated complete meal, served with a main meal item, starch option and vegetables.

Product Description	Main dish is a vegetarian with higher protein content	Main dish is a vegetarian with lower protein content
Band	1	2
Total Cooked Weight	Min 350g	Min 350g
Main Dish Weight	Min 120g	Min 120g
Sauces & Gravy		
Potato/Rice/Pasta	Min 90g	Min 90g
Vegetables *	Min 140g 2 different options	Min 140g 2 different options
Energy / Serve	Min 990kJ	Min 990kJ

Protein / Serve	Min 17g	Min 10g
Saturated Fat (/ 100g)	Max 3g	Max 3g
Sodium / Serve	Max 620mg	Max 620mg

* Vegetables as accompaniment, excludes vegetables in main dish

Main Salads

Band	Description	Portion size	Nutrients per portion size				Examples of typical compliant menu items
			Energy	Protein	Fat	Sodium	
1	Includes meat such as roasts and fish	Meat / fish min 90-110g Vegetables min 90g, min 4 options Starch 15-30g CHO		Min 20g	Max 20g	Max 25mmol (575mg)	Roast beef salad and tuna salad
2	Moderate protein content	Meat min 90g Vegetables min 90g, min 4 options Starch 15-30g CHO	Min 900kJ Including starch component	Min 10g	Max 30g	Max 25mmol (575mg)	Quiche and salad, egg salad
3	Additional variety salads.	Total weight min 90g	Min 100kJ	Min 5g			Caesar salad, rocket pear and walnut salad, poke bowls

The nutritional analysis for each Band excludes salad dressing (e.g., portion control pack). The nutritional analysis for each Band does include salad dressing used in composite salads.

Sandwiches, wraps and rolls.

Band	Description	Portion size and filling	Nutrients per portion size					Examples of typical compliant menu items
			Energy	Protein	Fat	CHO*	Sodium	
1	Significant nutrient value	Sandwich – 2 slices bread or equivalent. 1 Wrap (Equiv to 30 – 45g CHO) 1 Roll (Equiv to 30 – 45g CHO)	Min 800kJ including starch component	Min 10g	None specified	30 – 45g	Max 25mmol (575mg)	Egg and lettuce sandwich and roast beef sandwich, chicken & avocado wrap

		Min 50g lean meat or 21g cheese / sandwich / wrap /roll.						
2	Minimal protein value Included for a snack or light meal	Sandwich – 2 slices bread or equivalent. 1 Wrap (Equiv to 30 – 45g CHO) 1 Roll (Equiv to 30 – 45g CHO)	At least 500kJ including starch component	Min 3g	None specified	30 – 45g	None specified	Assorted sandwiches and salad sandwiches, roast vegetable & fetta wrap

*CHO- Carbohydrate

Desserts

Band	Description	Portion size	Nutrients per portion size				Examples of typical compliant menu items
			Energy	Protein	Fat	Calcium	
1	Moderate energy, high protein and calcium content (High calcium)	90-180g	Min 500kJ	Min 4g	Not specified	Min 100mg	Baked custard and cheesecake Can include combined desserts.
2	Significant level of energy and protein (High energy)	90-180g	Min 800kJ	Min 4g	Not specified	Not specified	Fruit-based desserts Can include combined desserts.
3	Provide moderate energy but little other nutrients of any significant value	Min 80g Mousse and whips min 50g	Min 300kJ	Not specified	Not specified	Not specified	Fruit crumble, mousse, plain ice-cream

Custards and sauces are additional dessert components and should not be less than 60mL.

References:

1.	Department of Human Services Victoria. Victorian Nutrition Standards for Menus in Hospitals and Residential Aged Care Facilities – 2009, Victoria: Victorian Health; 2009.
2.	Agency for Clinical Innovation, Nutrition Network. Nutrition Standards for Adult Inpatients in NSW Hospitals. Chatswood: Agency for Clinical Innovation; 2011.
3.	Standard 2.2.1 Meat and meat products [Internet]. Foodstandards.gov.au. 2016 [cited 24 March 2022]. Available from: https://www.foodstandards.gov.au/code/Documents/2.2.1%20Meat%20products%20v157.pdf

Standards Validation:

Validation of the Nutrition Standards

To assess the practicality of these standards and their ability to meet nutritional targets, demonstration meal selections have been developed and analysed to compare them with the nutrient goals requirements of the reference person / paediatric age group.

These various demonstration meal selections are designed to show that there are different patterns by which we can provide food within the context of these standards and meet the nutrient goals.

The objectives of demonstration meal selections are to indicate that it is achievable to meet the nutrient goals outlined in the Nutrition Standards, adopting various meal selection patterns.

The demonstration meal selections are **not** intended to:

- Demonstrate a gold standard in menu choice. Choices for the purpose of the demonstration meal selections have been modelled on choices of a patient who is choosing broadly from the menu. It is respected that individual patients choose differently according to their own needs and preferences.
- Demonstrate that all aspects of the minimum choices are achieved. Minimum choices recommendations are not guiding what an individual patient may choose as a meal selection. They are ensuring that there is a range of choice for the patient to select from over a day and over a menu cycle.
- Be used as a model or template from which to build a menu.
- Demonstrate the choices to be offered on a menu. The principles of menu design should determine considerations for choice of menu items, considering the needs and preferences of your facility population.

Demonstration Meal Selections - Suitable for Adult and Mental Health inpatients.

Pattern 1: Three meals plus three mid-meals

PC = portion control serve

Breakfast	110mL orange juice 2 biscuits Weet-Bix™ 25g prunes 150mL milk 1 poached egg 1 slice wholemeal toast + 1 PC margarine (10g) 1 PC strawberry jam 150mL coffee + 1 PC sugar
Lunch	180mL minestrone soup Wholemeal sandwich (2 slices bread) – tuna (50g), mayo and cucumber 120g peaches 110mL vanilla custard
Dinner	90g Roast pork + 40mL gravy 90g roast potato 70g peas 70g carrot batons 110mL Chocolate crème 1 slice wholemeal bread + 1 PC margarine (10g) 150mL tea + 1 PC milk + 1 PC sugar
3 mid-meals	2 cups tea (150mL tea + 1 PC milk + 1 PC sugar) 21g sweet plain biscuit 1 fresh apple 100g rice crackers (5) + 20g cheese 250mL chocolate milk

Pattern 2: Four meals plus two mid-meals.

Breakfast	110mL orange juice 2 biscuits Weet-Bix™ 25g prunes 150mL milk 2 slices fruit toast 2 PC margarine (20g) 150mL coffee + 1 PC sugar
Light Meal	250g Pasta Bolognaise 90g side salad + 13g dressing 1 slice wholemeal bread + 1 PC margarine (10g)
Main meal	90g lean roast chicken + 40mL gravy 90g boiled potato 70g broccoli 70g carrots 120g peaches 110mL vanilla custard 1 slice wholemeal bread + 1 PC margarine (10g) 150mL coffee + 1 PC milk + 1 PC sugar
Substantial midmeal	180mL minestrone soup 1 slice wholemeal bread + 1 PC margarine (10g) 100g rice crackers + 20g cheese
2 mid-meals	150mL tea + 1 PC milk + 1 PC sugar 250mL chocolate milk 21g sweet plain biscuit 1 fresh apple

Analysis[1] outcomes of Demonstration Meal Selections - Adult and Mental Health Inpatients

It is an expectation of the Nutrition Standards that:

- Protein and energy nutrient goals need to be achieved daily.
- Micronutrient nutrient goals need be achieved when averaged over a week. This means, that it may not be necessary to meet micronutrient goals every day, if on some days in a 7 day period they may be exceeded.

The results below demonstrate that it is achievable to meet the nutrient goals from two menu patterns.

This is made achievable when nourishing food options are included at midmeals. These nourishing midmeals support achieving protein, calcium, and energy nutrient goals.

Nutrient	Nutrient goal	Demonstration Selections 1	% Goal	Demonstration Selections 2	% Goal
Energy	8000kJ	8815kJ	110%	9557kJ	119%
Protein	90g	94.6g	105%	102.6g	114%
Saturated fat %E*	<10-13% Adults <10-11% Mental Health	10.7%	Met goal	11.3%	Met goal
Fibre	30g	31g	100%	34g	113%
Vitamin C	45mg	112mg	249%	129mg	287%
Folate	400µg	486µg	120%	600µg	150%
Calcium	1000mg	1204mg	120%	1113mg	111%
Iron	11mg	15mg	136%	19mg	173%
Zinc	14mg	14mg	100%	13.3mg	95%**
Sodium	<2300mg	2062mg	90%	2319mg	100%

**Determined by: (Sat Fat g x 37.7kJ) / Energy kJ x 100 = % saturated fat of energy*

***Within 10% of goal. Requirement is that micronutrient goals on average are achieved over a 7-day period.*

[1] There are limitations when using theoretical nutritional analyses as they may not account for actual nutrient loss for heat labile nutrients (e.g., vitamin C, folate and thiamin) incurred during cooking / heating. Exceeding the nutrient goal for these nutrients in the analysis may support confidence that the nutrient amount consumed is consistent with the nutrient goal.

Demonstration Meal Selections - Suitable for Paediatric inpatients.

Under one year of age

Pattern 1: Three meals plus breastmilk / 600mL infant formula

Breakfast	2 tablespoons infant rice cereal 120g two fruits, canned in natural juice 45g baked beans
Lunch	45g braised chicken 45g steamed potato 35g peas 35g cauliflower 100g full-cream vanilla yoghurt
Dinner	45g lamb, minced with gravy 45g baked potato 35g carrots 35g green beans 120g stewed apricots
Other*	600mL Breastmilk

*This is not selected from the menu but is in addition to menu selected food items and will be included in the nutritional analysis.

Pattern 2: Three meals plus breastmilk / 600 mL infant formula

Breakfast	1 biscuit Weet-Bix™ 1 boiled egg 1 slice wholemeal bread 1 PC margarine polyunsaturated
Lunch	45g brown lentils 45g white rice 35g pumpkin 35g broccoli 120g stewed apple puree
Dinner	45g beef, minced with gravy 45g pasta 35g peas 35g corn 120g pear, canned in juice
Midmeals	2 bite size wholewheat crispbread 1 banana 1 baby carrot (steamed, cut up)
Other*	600mL Infant formula

*This is not selected from the menu but is in addition to menu selected food items and will be included in the nutritional analysis.

1–3 years

Pattern 1: Three meals plus two mid-meals

Breakfast	100mL orange juice 1 biscuit Weet-Bix™ 1 banana 150mL full-cream milk or breastmilk 60g baked beans
Lunch	1 chicken and salad sandwich (2 slices white bread) 120g peaches, canned in natural juice
Dinner	60g lasagne, beef 35g coleslaw 1 wholemeal bread roll 120g apricots canned in juice 120mL custard
2 mid-meals	1 slice watermelon 1 wholewheat crispbread cakes 150mL full-cream milk or breastmilk 15g cucumber
Other*	600mL breast milk / infant formula

*This is not selected from the menu but is in addition to menu selected food items and will be included in the nutritional analysis.

Pattern 2: Three meals plus two mid-meals

Breakfast	100mL orange juice 30g wheat / corn / rice flakes 150mL full cream milk 1 scrambled egg 1 slice multigrain bread + 1 PC margarine, monounsaturated
Lunch	75g noodles 45g tuna 35g tomato 35g side salad without dressing 35g broccoli
Dinner	75g chicken pieces, crumbed 45g rice 35g pumpkin 35g green beans 120g pear, canned in natural juice
2 mid-meals	1 mandarin 2 savoury wheat crackers 150mL full-cream milk 30g wholemeal flat bread

*This is not selected from the menu but is in addition to menu selected food items and will be included in the nutritional analysis.

4–8 years

Pattern 1: Three meals plus two mid-meals

Breakfast	100mL apple juice 30g Rice Bubbles™ 150mL milk, reduced fat 1 slice grain toast + 1 portion canola margarine 1 portion jam 120g peach, canned in juice
Lunch	1 egg sandwich (2 slices white bread + 1 egg mashed) 1 green apple 125g reduced fat fruit yoghurt 120mL jelly
Dinner	45g roast chicken breast 45g mashed potato 35g pumpkin 35g peas 1 scoop ice-cream 150mL reduced-fat milk
2 mid-meals	6 small rice crackers 1 slice cheddar cheese 1 orange 150mL reduced-fat flavoured milk 15g chickpea snack

Pattern 2: Three meals plus two mid-meals

Breakfast	100mL orange juice 2 biscuit Weet-Bix™ 150mL reduced fat milk 90g canned spaghetti 1 slice white bread + 1 portion canola margarine
Lunch	60g chicken nuggets 45g potato wedges 35g side salad, no dressing 120g fresh fruit salad
Dinner	60g beef rissole 35g fresh tomato 35g coleslaw 1 small wholemeal bread roll 120g peaches, canned in natural juice 120g jelly 150mL reduced-fat milk

2 mid-meals	1 slice banana cake, iced 1 slice watermelon 3 savoury wheat crackers

9–13 years

Pattern 1: Three meals plus two mid-meals

Breakfast	100mL apple juice 30g cornflakes 150mL reduced-fat milk 2 slices wholemeal toast + 1 portion canola margarine 1 rasher bacon 120g peaches, canned in pear juice
Lunch	1 chicken and mayo sandwich (2 slices wholemeal bread, thick slice chicken, mayonnaise) 70g side salad, with dressing 4 slices cucumber 1 fresh red apple 120g jelly
Dinner	150g bolognaise sauce 90g spaghetti pasta 70g side salad with dressing 1 wholegrain roll + 1 portion canola margarine 120mL custard 150mL reduced-fat milk
2 mid-meals	Banana cake, iced 1 slice watermelon 6 rice crackers + 20g reduced-fat cheddar cheese 175g reduced-fat fruit yoghurt

Pattern 2: Three meals plus two mid-meals

Breakfast	100mL orange juice 1 slice wholemeal toast + 1 portion canola margarine 120g baked beans, canned in tomato sauce 150mL reduced-fat milk
Lunch	150g crumbed fish with mayonnaise 90g potato salad 70g side salad 125mL full fat fruit yoghurt 1 grainy bread roll with 1 portion margarine monounsaturated
Dinner	90g lamb chops, grilled 90g mashed potato 70g carrot 70g broccoli 120g jelly 90g ice cream
3 mid-meals	2 plain sweet biscuits 200mL reduced-fat chocolate flavoured milk 15g vege chips 1 medium pear 20g cheese

14 –18 years

Pattern 1: Three meals plus two mid-meals

Breakfast	100mL orange juice 4 biscuit Weet-Bix™ Weet-Bix™ 300mL reduced-fat milk 1 rasher bacon 70g tomato grilled 1 boiled egg 2 slices wholemeal bread + 2 P/C margarine, monounsaturated
Lunch	Hamburger (90 beef patty on a hamburger bun) 3 slices beetroot 70g side salad – cucumber, tomato, lettuce 90g hot potato chips 1 red apple
Dinner	150g chicken drumsticks, baked 90g steamed rice 70g broccoli 1 medium cob corn 120g apricots, canned in natural juice

	190g creamy rice
3 mid-meals	1 banana, raw 1 puffed rice bar with yoghurt coating 150g chocolate dairy dessert 150mL reduced-fat flavoured milk 4 savoury crackers

Pattern 2: Three meals plus two mid-meals

Breakfast	100mL apple juice 30g muesli with dried fruit 175g vanilla reduced-fat yoghurt 1 hash brown 120g pear, canned in natural juice 150mL reduced-fat milk
Lunch	Ham sandwich, white bread 3 spinach and cheese filo pastry + sweet chilli sauce 70g side salad without dressing 1 mandarin, raw
Dinner	90g lamb chops, grilled 90g mashed potato 70g carrot 70g broccoli 90g ice cream
2-3 mid-meals	4 water crackers 150mL reduced-fat flavoured milk 20g reduced-fat cheddar cheese 25g sultanas 30g hummus dip 45g apple muffin

Analysis[2] outcomes of Demonstration Meal Selections / Pattern – Paediatric Inpatients

It is an expectation of the Nutrition Standards that:

- Protein and energy nutrient goals need to be achieved daily.
- Micronutrient nutrient goals need be achieved when averaged over a week. This means, that it may not be necessary to meet micronutrient goals every day, if on some days in a 7 day period they may be exceeded.

The results below demonstrate that it is achievable to meet the nutrient goals from two menu patterns.

It is recognised as challenging to achieve the nutrient goal for iron for age groups <1 year old and 1–3-year-olds. Appropriate sources of iron for these age groups must be included on the menu. Sodium upper limit goals are also difficult to meet so menu planning to prioritise lower sodium options is very important.

Under one year (Infants 0-6 months and infants 7-12 months)

Nutrient	Nutrient Goal	Demonstration Selections Average	% Goal
Energy	3500kJ	4840kJ	138%
Protein	14g	46g	328%
Vitamin C	30mg	90mg	300%
Folate	80µg	250µg	312%
Calcium	270mg	480mg	178%
Iron	11mg	11mg	100%
Zinc	3mg	9mg	300%
Sodium	<120-170mg	450mg	265%

[2] There are limitations when using theoretical nutritional analyses as they may not account for actual nutrient loss for heat labile nutrients (e.g., vitamin C, folate and thiamin) incurred during cooking / heating. Exceeding the nutrient goal for these nutrients in the analysis may support confidence that the nutrient amount consumed is consistent with the nutrient goal.

1–3 years

Nutrient	Nutrient Goal	Demonstration Selections Average	% Goal
Energy	4200kJ	5300kJ	126%
Protein	14g	54g	386%
Fibre	14g	18g	128%
Vitamin C	35mg	115mg	328%
Folate	150µg	380µg	253%
Calcium	500mg	750mg	150%
Iron	9mg	8mg	89%
Zinc	3mg	6mg	200%
Sodium	<1000mg	1170 mg	117%

4–8 years

Nutrient	Nutrient Goal	Demonstration Selections Average	% Goal
Energy	5500kJ	6880kJ	125%
Protein	20g	64g	320%
Saturated/ trans-fat %E*	<10-13%	10%	Meets goal
Fibre	18g	20g	111%
Vitamin C	35mg	154mg	481%
Folate	200µg	536µg	268%
Calcium	700mg	905mg	129%
Iron	10mg	9mg	90%
Zinc	4mg	8mg	200%
Sodium	<1400mg	1680mg	120%

9–13 years

Nutrient	Nutrient Goal	Demonstration Selections Average	% Goal
Energy	7500kJ	10140kJ	135%
Protein	40g	113g	282%
Saturated/ trans-fat %E*	<10-13%	12%	Meets goal
Fibre	24g	28.5g	119%
Vitamin C	40mg	145mg	362%
Folate	300µg	690µg	230%
Calcium	1300mg	1370mg	105%
Iron	8mg	13.5mg	169%
Zinc	6mg	14mg	233%
Sodium	<2000	2980	149%

14–18 years

Nutrient	Nutrient Goal	Demonstration Selections Average	% Goal
Energy	9400kJ	10900kJ	116%
Protein	65g	125g	192%
Saturated/ trans-fat %E*	<10-13%	11%	Meets goal
Fibre	28g	33g	118%
Vitamin C	40mg	170mg	425%
Folate	400µg	670µg	167%
Calcium	1300mg	1430mg	110%
Iron	15mg	17mg	113%
Zinc	13mg	17mg	131%
Sodium	<2300	2630	114%

User Guide:

The Nutrition Standards are a tool to support menu planning and design. Their focus is to ensure that patients and consumers in NSW Health facilities **have the opportunity** to select from a range of foods to meet their nutritional needs. The Nutrition Standards reflect the importance of designing a menu that meets the needs of the patient population, acknowledging that there are differences in patient cohorts across NSW Health facilities.

Designing menus that offer adequate nutrition and variety is complex and should be completed by appropriately skilled staff. Key stakeholders such as food service staff, clinical dietitians, consumers, residents and carers should be involved in the process.

The Nutrition Standards provide a framework to provide confidence that the menu being developed is providing the opportunity to:

- meet nutrient goals
- choose from a variety of food groups which is consistent with healthy eating messages, and
- choose from a range of foods which meet the preferences of the patient population.

The Nutrition Standards have 5-6 key assessable components which can be used to benchmark the compliance of a menu to the Standards. These include:

- Nutrient Goal Standards
- Menu Design Standards
- Minimum Standards Serves
- Minimum choice standards
- The Bands
- The Overarching Principles

The Nutrition Standards also contain informational components which can help support decision making in the menu development process. E.g.: Special considerations for patient cohorts.

How to Apply the Nutrition Standards to Menu Design.

1. Engage key stakeholders

When designing a menu, it is important to know your patients and understand their needs. A patient centered approach to menu design, must consider:

- The physiological and clinical needs of the patients.
- The variations in their length of stay in the facility.
  For instance, how many stay for < 3 days, how many stay for up to 7 or more days, how many stay for multiple weeks?
- The variations in the age groups of the patients. This will inform developmental needs, but also any special considerations.
- The cultural and religious preferences of the patient cohorts.

Consideration of the above can help inform menu planning decisions such as:

- The style of menu to meet the needs of the patients
- Length of the menu cycle

- Whether development of cohort specific short stay menus is viable.
- Whether a long stay supplemental menu is required?
- How mid meal offerings should be managed?
- The type and range of menu items to include. (e.g., paediatric friendly, culturally specific etc.)
- Which Nutrition Standards are applicable to your patient cohorts?
  It is possible that depending on the patient population, you need to apply the different nutrition standards to different components of your facility. E.g., paediatric wards require implementation of the Paediatric Nutrition Standards, Mental Health wards / facilities require implementation of the Mental Health Nutrition Standards.

2. Plan your range of choice – The opportunity to choose food items.

When planning the menu, the **Minimum Choice Standards** should be applied to ensure that a range of choices are offered both throughout the day and across the menu cycle. Remember, these guide the minimum opportunities to choose these items. Additional opportunities are encouraged if they will meet the needs of your patient cohorts.

The **Menu Design Standards** are divided into global menu design considerations in addition to the menu item specific considerations.

The global menu design standards considerations will help confirm if you are designing a menu which is targeting the identified needs of your patient population. The menu item design standards will help confirm that you are offering a minimum variety of choice over the menu.

3. Specify the serve sizes

The **Minimum Standard Serves** should also be applied to all relevant menu items. The serve sizes listed are the minimum and can be exceeded if desired and appropriate.

4. Consult with consumers

Seek feedback from patients/consumers/residents to ensure the menu planning is meeting their needs.

5. Focus on Nutrition – Ensure the nutrient goals are met.

When you have drafted your range of choice, check the compliance to the **Nutrient Goals Standards** to confirm that the nutrient goals are being achieved.

To complete this activity, you will need to have completed some menu analyses including:

- nutritional composition and ingredient data on all foods/menu items offered on the menus.
- identified which **bands** relevant menu items align with.
- analysis of sample menu selections which are representative of what might reasonably be selected from the menu over the day

By demonstrating compliance to the nutrient goal standards, you are providing confidence that the menu can provide adequate opportunities for a patient to meet their nutritional needs.

6. Confirm the Overarching Principles are applied.

As a final step, it is valuable to confirm that the standard menu you have designed is consistent with the overarching principles of the Nutrition Standards.

During all stages of the menu design process, any areas where compliance is not achieved should be recognised as a prompt to review the design with a goal to improve the area of noncompliance.

Development History:

The Agency for Clinical Innovation (ACI) is the lead agency for innovation in clinical care. We bring patients, clinicians and managers together to support the design and implementation of innovation in healthcare.

Our vision is to create the future of healthcare, and healthier futures for the people of NSW.

History of the ACI Nutrition Standards

In 2009, following recommendations released in the 2008 Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals, the ACI established the Nutrition in Hospitals Working Group to advise NSW Health about developing an integrated approach to optimizing food and nutritional care in NSW public healthcare facilities. Under the guidance of the NSW Health Food and Nutrition Committee (peak governance group for food and nutrition), the group pioneered work in developing a suite of nutrition and diet governance documents to support the provision of food and nutrition in NSW Health facilities. These foundation documents included nutrition standards and therapeutic diet specifications.

Nutrition standards were designed to ensure that hospital menus provide the opportunity for patients to select food that satisfies their nutrient requirements and enhances their experience in hospital. They do this by:

- providing a sound nutritional basis for the development of the standard hospital menu, and
- establishing overarching principles that ensure a patient-focused food and nutrition service.

Therapeutic Diet Specifications give guidance about the type and quantities of suitable foods for adult and paediatric inpatients needing a range of therapeutic diets. The specifications:

- describe the foods allowed / not allowed in each diet
- provide nutrient targets for each main meal component, for those diets requiring quantitative nutrient levels.

The original suite of documents included:

Nutrition Standards:

Nutrition standards for adult inpatients in NSW hospitals

- Published in 2011.
- Development led by Peter Williams, Associate Professor, Nutrition and Dietetics, University of Wollongong.

Nutrition standards for paediatric inpatients in NSW hospitals

- Published in 2011.
- Development led by a Paediatric Reference Group, creating a companion document to the adults' standards developed by Peter Williams, Associate Professor, Nutrition and Dietetics, University of Wollongong.

Nutrition Standards for Consumers of Inpatient Mental Health Services in NSW

- Published in 2013.
- Development led by Professor Peter Williams, Nutrition and Dietetics, University of Canberra.

Therapeutic Diet Specifications:

Therapeutic diet specifications for adult inpatients

- Published in 2011.
- Development led by Peter Williams, Associate Professor, Nutrition and Dietetics, University of Wollongong.

Therapeutic diet specifications for paediatric inpatients

- Published in 2012.
- Development led by Sheridan Collins, Consultant Paediatric Dietitian.

Revision of the ACI Nutrition Standards - 2022

It is well established in NSW Health that the nutrition standards operate as an interface between the operationalisation of food delivery and the provision of nutrition as part of medical care. NSW Health clinicians have confidence in the role the nutrition standards play in ensuring that the food offered to patients in NSW Health facilities is based on nutritional principles of offering safe, varied food choices of high nutritional and taste quality.

In 2019, the Nutrition in Hospitals Committee identified that a high priority of the Nutrition Network is to continue to maintain currency and relevance of these standards to ensure the continued recognition of the importance of nutrition as part of food service delivery in NSW Health facilities. It was also identified that the current standards did not prioritise a patient centred approach to food and nutrition, and that they were not formatted for ease of navigation which was contributing to subjective interpretation of content.

In 2020, the ACI Nutrition in Hospitals Committee commenced the review of the existing suite of nutrition standards (adults, paediatrics and mental health). The review included the following key milestones:

- Formation of an ACI Nutrition Standards Reference Group
- Evidence reviews – including literature and patient admission data
- Development of a consultation framework – including formative (feedback about the original standards) and confirmatory (feedback about the drafted revision) cycles
- Stakeholder consultation (formative) – engaging clinicians, food service providers and food industry partners
- Consumer consultation – using a consumer jury format (formative)
- Content revision guided by formative feedback
- Stakeholder consultation (confirmatory)
- Draft finalisation

Key objectives considered during the review process included ensuring the standards remain:

- evidence based
- be patient centred – providing opportunity for choice as opposed to directed provision
- easy to navigate, interpret and implement
- able to allow for flexibility and innovation in local implementation – including different service delivery models (that is, describing minimum standards without being unnecessarily prescriptive).
- nationally consistent where possible
- acceptable to consumers, their carers and families.

Key Contributors to the Nutrition Standards Revision - 2022

Sheridan Collins	Chair – ACI Nutrition Standards Reference Group Co-chair Nutrition in Hospitals Network, Agency for Clinical Innovation Senior Paediatric Dietitian, The Children's Hospital Westmead, Sydney Children's Hospital Network
Suzanne Kennewell	Co-chair Nutrition in Hospitals Network, Agency for Clinical Innovation Director, Nutrition and Dietetics Sydney LHD
Amanda Carter	Senior Paediatric Dietitian, The Children's Hospital Westmead, Sydney Children's Hospital Network
Amber Thoroughgood	Food Service Dietitian, Hunter New England LHD
Angela Thompson	Food Service Dietitian, HealthShare NSW
Ann Buckley	Food Service Dietitian, HealthShare NSW
Brielle Gosch	Dietitian and Dietetic Manager, Sutherland Hospital, South East Sydney LHD
Chloe Fox	District Food Service Dietitian, Western NSW LHD
Clare Klimes	Dietitian and Dietetic Manager, The Children's Hospital Westmead, Sydney Children's Hospital Network
Cynthia Liang	Food Service Dietitian, HealthShare NSW
Dallas Demeny	Food Service Dietitian, HealthShare NSW
Denise Wong See	Dietitian and Dietetic Manager, John Hunter Children's Hospital, Hunter New England LHD
Jeremy Wing	Nutrition Services Manager, HealthShare NSW
Lucienne Dobbin	Dietitian, Prince of Wales Hospital, SESLHD
Margaret Holyday	Director, Nutrition and Dietetics, South Eastern Sydney LHD
Mel Schier	Nutrition Network Manager, Agency for Clinical Innovation
Olivia Millett	Mental Health Dietitian, Wagga Wagga Hospital, Murrumbidgee LHD
Rebecca Parker	Dietitian, The Children's Hospital Westmead, Sydney Children's Hospital Network
Sarah Cullen	Consumer Representative
Tessa Heinonen	Mental Health Dietitian, Bloomfield Hospital, Orange, Western NSW LHD

References:

(Will be collated from the reference tables in the individual sections.)

Methods used for developing this document

The review of the ACI Nutrition Standards was endorsed by the NSW Health Nutrition and Food Strategic Steering Group in September 2020. The ACI Nutrition Standards was developed with leadership of the ACI Nutrition Network, and collaboration with the ACI Nutrition Standards Review Reference Group.

Document information	
Version number	Draft for comment v 1
Original publication date	February 2023
Developed by	Lead author: ACI Nutrition Network This diet specification has been developed in collaboration with the ACI Nutrition Standards Review Reference Group.
Consultation	For consultation with the following: - Districts - Relevant areas in the Ministry of Health - HealthShare - ACI Nutrition Network - Participants in Formative Consultation process
Review due	5 years after approval

NOT PART OF STANDARDS – Just a formatting concept.

Sample – alternative format Macronutrients

Nutrient	Nutrient Goal
Energy	8000kJ / day
Nutrient Goal Standards	
• The menu provides opportunity to choose a range of food and fluids of appropriate energy content to achieve the nutrient goal for energy.[1] • Access to large serves or extra serves is available. • Energy dense foods and fluids (e.g., nutrient-dense soup, desserts) are offered at each meal. • Access to energy fortified / nutrient dense options are available for those with smaller appetites. • A high energy mid-meal snack, with at least 500kJ per serve is offered once per day, and available to access at other times for those who require additional energy. (This may be a combined high protein / high energy snack.) • A lower energy mid-meal snack, with not more than 400kJ per serve is offered at each mid meal.	
Rationale / Commentary	
• 8000kJ is based on a reference adult male of 76kg[2], 105 kJ/kg/day. (1,2,3,5) • Individuals' energy requirements will vary and are increased in the malnourished, those with certain diseases and during some treatments. • Insufficient energy intake is a common cause of poor nutritional status, particularly for elderly patients. • Mechanisms are needed for patients with higher energy needs to achieve these intakes while selecting from the standard menu. This may include access to additional food options, fortified foods or nourishing snacks, access to therapeutic diets or additional nutrition support.	

Sample – alternative format Menu Choice

Menu Item	Minimum Serve Size
Fruit *Fresh or canned*	150 g fresh fruit (1 medium piece, 2 small pieces or 5 prunes) or 120g serve canned fruit
Minimum choices – variety and frequency	
• 1 option at each main meal • 1 option at each mid meal	
Menu Design Standards	
• A variety of fruit is offered including full pieces, canned options and cut up options.	