

Project Report: **Investigating practices related to** **malnutrition in Queensland Health facilities**

A Pressure Ulcer Prevention Collaborative project
July 2008

Executive summary

Malnutrition is prevalent in Queensland Health hospitals and residential aged care facilities, and is related to significant adverse outcomes, including increased length of hospital stay and higher odds ratio of pressure ulcers. Currently in Australia there is a general lack of awareness and recognition of malnutrition. By not ensuring that systems are in place to identify, prevent and treat malnutrition, patients are at increased risk of developing complications, including pressure ulcers, and Queensland Health is at risk of litigation and increased treatment costs. This is the report from a quality improvement study undertaken by the Pressure Ulcer Prevention Collaborative between February and June, 2008 to investigate practices related to the identification, prevention and treatment of malnutrition in patients cared for in Queensland Health hospitals and aged care facilities.

The study reviewed 14 facilities Queensland Health representing different service categories and locations and involved interviews with 52 clinicians and a written survey to 780 clinicians. The response rate to the survey was 48%. Key findings were:

- six facilities (42%) had systematic malnutrition screening on admission via nursing staff (2 facilities), a combination of dietetic assistants and nursing staff (3 facilities) and a combination of a dietitian and nursing staff (1 facility). There is a policy to support this in 5 of the 6 facilities
- six facilities (42%) had malnutrition screening in place but there are significant gaps in completion, documentation and/or referral procedures for assessment and treatment
- two facilities (14%) did not have systematic malnutrition screening on admission
- seven facilities (50%) included dysphagia screening questions on admission tools
- residential care facilities had well established procedures to monitor weight at fixed intervals as a requirement of accreditation and an acknowledged duty of care to ensure an adequate food and fluid intake
- no hospitals had systematic rescreening of nutritional risk, mainly because of a lack of systematic procedures to repeat weight at fixed intervals. The written survey identified that many hospital clinicians disagree that weight should be recorded at fixed intervals
- nursing staff in residential care facilities took overall responsibility for nutrition management
- there is a lack of role clarity among hospital clinicians in nutrition management
- 37% of clinicians agreed with the statement "in my unit the nutritional intake of patients/residents is so inadequate that it has clinical implications". This reflects the numerous identified barriers to achieving adequate food intake in patients/residents of Queensland Health facilities including food service system issues and menu options, disruption of meals for rounds, diagnostic/other procedures (especially in larger hospitals), a lack of preparation and setting-up for meals (especially in larger hospitals), a lack of assistance with feeding, prolonged fasting for theatre/tests with frequent cancellations (common in large hospitals) and gaps in monitoring of food intake including a poor completion rate of food intake records
- only 5 of 11 hospitals (45%) had up-to-date policies on nutrition management
- no facility had a nutrition steering committee with representation from all clinician stakeholders
- 21% of clinicians identified gaps in knowledge in identification and management of malnutrition

1. Recommendations for Health Service Districts

1.1. Malnutrition screening

- 1.1.1. implement systematic malnutrition screening on admission, including efficient referral pathways for nutrition assessment and treatment for those identified at risk of malnutrition
- 1.1.2. District Directors of Nursing should ensure that food and fluid intake of patients/residents meets best practice nursing standards, including monitoring of food and fluid intake throughout the episode of care and routine weight monitoring, with clear referral pathways for those losing weight and/or eating poorly
- 1.1.3. assess outpatient services to determine whether malnutrition screening should be implemented and/or expanded for high-risk groups
- 1.1.4. implement quality activity projects to assess compliance and accuracy of malnutrition screening, and efficiency of referral pathways

1.2. Malnutrition assessment, treatment and monitoring

- 1.2.1. engage clinicians to develop a multi-disciplinary team approach to feeding and nutrition, with acknowledged responsibility by all team members
- 1.2.2. based on areas of highest need, implement and evaluate systems to: improve access to appropriate menus and availability of mid-meal food and fluids, reduce disruption of meals for rounds, diagnostic and other procedures, improve set-up for meals and assistance with feeding, monitoring of food and fluid intake, and/or access to food including after hours and between meal-time access to food following cancellation of theatre and/or tests
- 1.2.3. implement the use of validated nutrition assessment tools to standardise practice and maximise case-mix funding by diagnosing malnutrition

1.3. Implement sustainable systems to routinely include information on nutritional status in discharge summaries, to facilitate communication with primary care providers, and care across the continuum.

1.4. Implement effective governance via the establishment of multi-disciplinary nutrition steering committees at each facility. Terms of reference should include food service quality and safety, overseeing development of policies and procedures, informing role clarity in nutrition management and addressing role delineation and skill mix, overseeing projects to improve food intake and access to food, and facilitating and overseeing a continuous education program

2. Recommendations for the state-wide Food Service Steering Committee

Food supply should be addressed at a broader level by applying leverage to reduce budgetary constraints and improve access to high quality and nutrient dense foods. The committee should develop policies incorporating nutrition targets and menu plans to prevent and treat malnutrition in patients/residents of Queensland Health facilities.

3. Recommendations for the Patient Safety Centre

- 3.1 communicate the results and recommendations of this report to raise awareness of patient outcomes and organisational risk associated with malnutrition in Queensland Health
- 3.2 oversee the implementation and evaluation of the recommendations of this report via development of a Queensland Health policy on identification, management and prevention of malnutrition, sample malnutrition management policies, and based on the identified gaps in clinician knowledge and awareness of malnutrition, develop, implement and evaluate training and education materials
- 3.3 consider a Patient Safety Centre portfolio for malnutrition prevention, similar to the current state-wide Pressure Ulcer and Falls prevention portfolios
- 3.4 advocate on behalf of Queensland Health to make malnutrition risk management an ACHS criterion
- 3.5 assist with establishing partnerships with the Safe Practice Medication Unit to achieve improvements in recording of weight for Queensland Health inpatients

Background

In Australia there is much literature and discussion on the high and increasing prevalence of overweight and obesity and related disorders, including diabetes. Disorders related to 'over-nutrition' are now a national health priority.¹ Emphasis placed on this extreme of nutritional status, has resulted in little awareness of the other extreme, under-nutrition or malnutrition, in the Australian population. However, there is evidence that malnutrition does occur in high proportions in certain populations. Malnutrition has been found to be in the order of 30% of acute patients and 50% of aged care residents in Queensland Health facilities.² Malnutrition is recognized as having serious implications for health and recovery from illness and surgery, and impacts on length of hospital stay, convalescence and healthcare costs.³ Malnutrition is also independently associated with a higher odds risk of pressure ulcers in patients in Queensland Health facilities. The odds ratio of having a pressure ulcer if malnourished is greater than two times, increasing to nearly five times in severely malnourished individuals.⁴ In Australia, there is a general lack of awareness and recognition of the problem of malnutrition, with currently no policy, standards or guidelines related to the identification, prevention and treatment of malnutrition. By not ensuring that systems are in place to identify, prevent and treat malnutrition, patients are at increased risk of developing complications, including pressure ulcers, and Queensland Health is at risk of litigation and increased treatment costs.

The purpose of this report is to communicate the key findings and recommendations of the quality improvement study undertaken by the Pressure Ulcer Prevention Collaborative between February and June, 2008 to investigate practices related to the identification, prevention and treatment of malnutrition in patients cared for in Queensland Health hospitals and aged care facilities. The study reviewed 14 Queensland Health facilities representing different service categories and locations. Facilities were chosen from the Australian Institute of Health and Welfare list of peer facilities⁵ and included 11 hospitals (two metropolitan tertiary, one metropolitan principal referral, one regional tertiary, two regional principal referral, one large regional, two medium regional, one small regional and one remote hospital) and three residential care facilities (two metropolitan stand-alone, one regional). The site visits involved

1. interviews with a goal of four clinicians/site: one medical officer, two nurses and one dietitian to obtain information on systems and practices related to identification and treatment of malnutrition. Responses were compared with the guidelines endorsed by the National Institute for Clinical Excellence (NICE)⁶ and Council of Europe (Committee of Ministers)⁷.

In total 52 clinicians were interviewed from a target of 56. Two medical clinician interviews were not conducted due to work constraints. Clinicians interviewed were 11 medical officers (21%), 27 nurses (52%), and 14 dietitians (27%)

2. a written survey of a sample of medical, nursing and allied health staff to determine clinician awareness and attitudes to malnutrition. Three hundred and seventy four surveys were returned out of 780; a 48% response rate. Sixty-four percent of the

¹ NHMRC, 1997, National Obesity Taskforce, 2003.

² Banks M et al *Nutr Diet* 2007; 64: 172-8.

³ Stratton R et al *Disease-related Malnutrition: an Evidence-Based approach to treatment*, 2003. Wallingford UK, CABI Publishing

⁴ Banks M et al *Clin Nutr* 2007; 2 (Supp):9

⁵ <http://www.aihw.gov.au/publications/hse/ahs05-06/ahs05-06-x02.xls>

⁶ National Institute for Clinical Excellence Nutrition support for adults. www.nice.org.uk February 2006

⁷ Council of Europe (2003) Resolution ResAP(2003)3E on food and nutritional care in hospitals. www.coe.int.

survey responses were from nurses, 11% from medical staff and 25% from allied health (physiotherapy and dietetics both 5%; occupational therapy and speech pathology both 4%, pharmacy and other allied health disciplines both 3%). Response rates by discipline were 31%, 48% and 45% for medical, nursing and allied health respectively.

Data collected during this project has been assessed against the following framework:

1. nutritional risk screening, referral pathways
2. nutrition assessment, treatment and monitoring
3. care across the continuum
4. overarching governance

Appendix 1 lists the standards that were assessed, as determined by NICE ⁶ and The Council of Europe.⁷

Key findings

1. Nutrition risk screening

Malnutrition screening is the process of identifying patients/residents with characteristics commonly associated with nutrition problems that may require comprehensive nutrition assessment.⁸ The outcome of screening will lead to a decision that the patient/resident is not at-risk of malnutrition, but may need to be re-screened at specified intervals, or the patient/resident is at-risk and needs further assessment.

1.1 Nutrition risk screening on admission:

The majority of clinicians agreed that nutrition risk screening should be undertaken on admission, with 98% of residential care clinicians (n=30) and 86% of hospital clinicians (n=340) agreeing with the statement “all patients/residents should be screened for nutritional risk on admission”. Clinicians at all facilities reported that there were procedures in place for screening inpatients for malnutrition. Malnutrition screening is commonly undertaken *informally* during medical and nursing admissions using a wide range of parameters. Medical staff reported using body mass index, blood tests (electrolytes, protein, calcium, zinc, folate etc), loose fitting clothes, general appearance, muscle wasting, diet history, pressure areas, and dysphagia. Nursing staff reported using weight loss, loose fitting clothes, poor oral intake, skin integrity, dysphagia, information from relatives, wasted muscles, enquiring about community support.

These results are similar to a recent study of Victorian clinicians⁹. However, reliance on the above processes will identify patients/residents with severe and obvious malnutrition, and is likely to miss patients with mild malnutrition or those who are at risk of malnutrition.

Six of 14 facilities (42%) had systematic formal, malnutrition screening on admission:

- in two hospitals, nursing staff undertook on-admission malnutrition screening. One medium regional hospital used an electronic system (Trend) that incorporates the malnutrition screening tool (MST) a validated tool. At the second hospital (a remote hospital), the MST had been recently incorporated into the Waterlow tool, supported by a Pressure Ulcer management policy required completion of this tool. The implementation of the new tool and referral pathways were listed on the hospital's Quality and Action Plan for 2008.
- in three facilities, malnutrition screening was undertaken by dietetic assistants in combination with nursing staff. In two hospitals (one metropolitan tertiary & one metropolitan principal referral), dietetic assistants checked the patient admission and assessment form in the bed-chart to ensure that the MST has been completed by nursing staff and undertook screening where it has not been completed. In one metropolitan tertiary hospital dietetic assistants undertook screening independently of nursing staff. In two hospitals the MST is included in the Waterlow tool, and the Pressure Ulcer management policies require completion of this tool on admission. One hospital has a policy on malnutrition screening, while the other two facilities have

⁸ American Dietetic Association (1994)

⁹ Adams N Nutrition and Dietetics 2008;65:144-150

- work unit guidelines outlining screening procedures for dietetic assistants
- in one residential care facility, the dietitian routinely undertook nutrition assessment on all new admissions, and nursing staff undertook malnutrition screening during completion of the Waterlow tool. The district pressure ulcer management policy required completion of the Waterlow on admission and at least second monthly.

The accuracy of completion of the malnutrition screening by nursing staff and dietetic assistants was not assessed during this project.

Six of 14 facilities (42%) had malnutrition screening in place but there were significant gaps in malnutrition screening on admission due to:

- gaps in nursing staff completion rates of the MST incorporated into the Waterlow tool, with additional gaps in referral for assessment (one regional principal referral, and one small regional hospital, despite the District Pressure area care policy for the latter hospital stating that the Waterlow Tool should be completed on admission and when the clinical condition changes)
- a combination of gaps in completion of the MST incorporated into the Waterlow tool (despite the District Pressure area care policy requiring completion of the Waterlow on admission and when condition changes), combined with a nutrition assistant model for identifying malnourished patients not being sufficiently comprehensive due to an historical triaging process (one regional principal referral hospital). At this hospital, systematic screening was in place for geriatric patients admitted to the Aged Care and Rehabilitation ward using an electronic assessment tool (interRAI Acute Care)
- a lack of nursing documentation of MST scores during completion of the Waterlow tool. At one large regional hospital malnutrition screening is undertaken by a dietetic assistant, however this is a sole position with no leave cover
- gaps in referral pathways for nutrition assessment following nursing completion MST included in the continuity of care form (one medium regional hospital) or Waterlow tool (one residential care facility). At the regional hospital, the access to the off-site consultative dietitian service was not adequately formalised.

Two facilities had no systematic malnutrition screening on admission. In one regional tertiary hospital the nursing patient care plan does not incorporate a malnutrition screening tool. The residential care facility does not currently use a version of the Waterlow tool that incorporates the MST, and while a large amount of other diet-related information is routinely collected on admission, assessment of nutritional risk is informal.

1.2 Nutrition risk rescreening

1.2.1 Residential Care facilities

Eighty eight percent of clinicians in residential care facilities agreed “all residents should have repeated nutritional screening throughout their stay”, and the remainder were neutral. All residential care facilities have systems in place to regularly monitor and record weight as an accreditation requirement. All clinicians who responded to the written survey agreed with the statements all residents “should be weighed on admission”, and “at fixed intervals”. Weight monitoring was observed to be a care priority, despite being labour intensive.

Accordingly nutrition risk rescreening is implemented very well at all of the residential care facilities. Two of the three residential care facilities had clear referral pathways for nutrition assessment and treatment based on weight loss (2kg or 5% weight).

1.2.2 Hospitals

- 86% of all hospital clinicians who completed the written survey agreed that weight should be recorded on admission. Responses from medical staff were analysed separately, with 78% agreeing weight should be recorded on admission. However practices around recording admission weight are poor. While 30% of hospital clinicians indicated that all patients are weighed on admission, another third indicated that less than half of patients are weighed on admission. There was a trend for medium, small and remote hospitals to routinely record admission weight. Clinicians overwhelmingly saw nurses as responsible for weighing patients
- 65% of hospital clinicians agreed “all patients should have repeated nutritional screening throughout their stay”, while 11% disagreed. There were no trends across facilities or disciplines
- 13% of medical staff disagreed that “patients should be routinely weighed at fixed intervals”, while 16% of nursing staff disagreed (range 0-50%), with no trends with facility size. This translates into clinical practice with 50% survey respondents reporting weight is repeated on less than half of inpatients, and 7% indicating no patients are reweighed during admission. We are aware that it is not always possible to weigh patients, especially those who are acutely unwell. In this case the only alternative to identify possible nutritional decline is to carefully monitor food intake
- a number of clinicians commented that access to reliable equipment to weigh patients is a barrier.

No hospitals had adequate procedures to systematically identify nutritional decline during admission. Out of the five hospitals that have efficient, systematic malnutrition screening on admission, none had adequate systematic re-screening processes, despite efforts to attempt this in some hospitals

1.1.1.1 in the two hospitals where nursing staff undertake screening on admission, the district policy for the remote hospital required that the Waterlow (incorporating MST) is repeated following a significant clinical event or change in condition, but not at fixed intervals. At the medium regional hospital that used an electronic system there is no policy to repeat screening using the electronic system. During interviews clinicians identified a gap in procedures to repeat weight at fixed intervals. In the two metropolitan tertiary hospitals where malnutrition screening on admission was undertaken jointly by dietetic assistants and nursing staff, the pressure ulcer management policy requires completion of the Waterlow tool at least weekly or when there is a clinical change, and the dietetic assistants attempted to rescreen weekly. This screening tool relies on the availability of repeat weights. However, 55% and 48% of clinicians at these two facilities who responded to the written surveys reported that less than half of patients are weighed at regular intervals. The

lack of availability of repeat weights severely limits the accuracy of repeat malnutrition screening

1.1.1.2 at the metropolitan principal referral hospital where malnutrition screening was undertaken jointly by dietetic assistants and nursing staff, nursing staff did not repeat the malnutrition screening during admission, and while the dietetic assistants attempt rescreening, again there is a lack of availability of weights. Seventy nine percent of respondents at this facility indicated that weight is repeated on less than half of patients and 29% of nursing respondents (five of 17) disagreed that patients should be weighed at fixed intervals

1.2.3 Dysphagia screening

The NICE guidelines recommend that Health care professionals should take potential swallowing problems into account.⁶ While most facilities have referral pathways for swallow assessment by Speech Pathologists for patients admitted with CVA's, only half of the facilities visited had one or more dysphagia screening question/s incorporated into nursing admission/ assessment tools (all residential care facilities, one metropolitan tertiary, one metropolitan, one regional principal referral, and one remote hospital).

1.2.4 Nutrition risk screening: outpatients

No hospitals had systematic screening of outpatients at the first clinic visit, although nutrition risk screening using validated tools had been implemented for a number of high risk groups eg. elderly (over 70 years) in the Emergency Department via CHIP nursing staff (one regional tertiary), falls clinic (metropolitan tertiary) surgical pre-admission clinics (metropolitan tertiary & large regional), and oncology day therapy units. Referral pathways for assessment and treatment were reported to be particularly problematic for the surgical pre-admission areas.

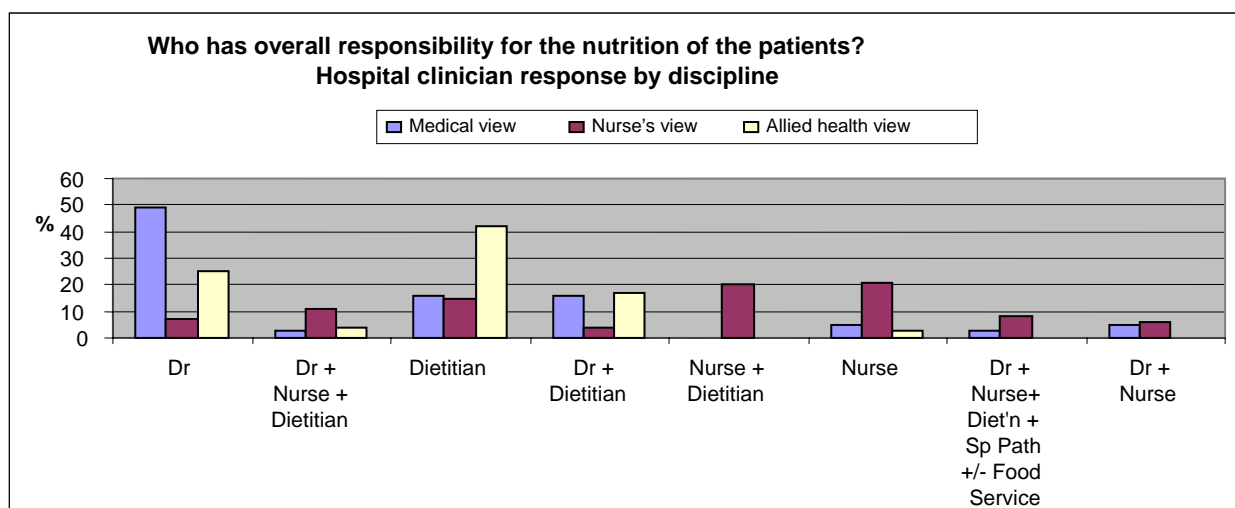
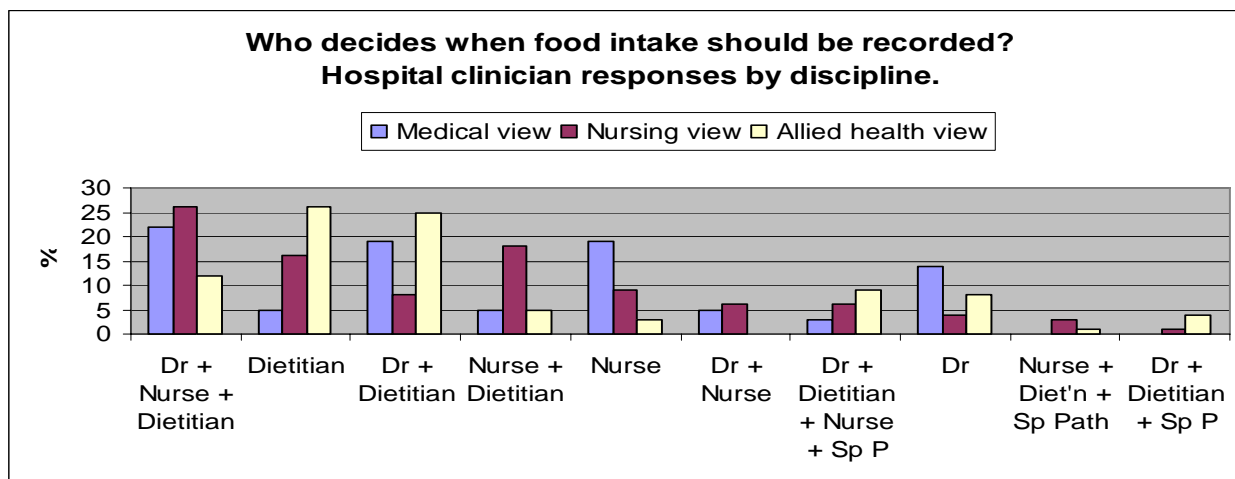
2. Nutrition assessment, treatment and monitoring

At all three residential care facilities, nursing staff were seen to have the overall responsibility for the nutrition management of residents/patients and deciding when food intake will be recorded, with the latter usually in conjunction with the dietitian. In the regional facility without an on site dietitian the nursing staff also take on this role, apparently with difficulty, as five of the eight (63%) nurses from this facility who completed the written survey agreed with the statement "I find it difficult to implement a nutrition plan for patients", the other three responses were neutral. Clinician agreement with this statement for all other facilities ranged from 0-25%.

In the 10 hospitals with on-site dietitians, the dietitian was seen as having a lead role in nutrition assessment, and recommending high energy diets and/or nutrition management, in liaison with the multi-disciplinary team. In three facilities, dietitians are not using validated tools for nutrition assessment. This has implications for casemix funding, as from July 2008 clinical coders will accept malnutrition diagnoses by dietitians in the presence of adequate documentation.

The written survey highlighted a lack of role clarity by different disciplines in nutritional management in Queensland Health hospitals and two of three residential care facilities. Sixty two percent of clinicians agreed with the statement "more clarity is required around

who is responsible for nutrition assessment and planning”; with similar levels of agreement by medical, nursing and allied health staff. Clinician views relating to responsibility for deciding when to record food intake and overall responsibility for nutrition of patients also showed diverse views by discipline. This lack of role clarity probably contributes to the poor completion rate of food intake records, and may impede timely implementation of nutrition treatment plans.



All hospitals and one residential care facility had gaps in compliance with nutrition treatment and monitoring. These issues can exacerbate nutritional decline during hospitalisation/ placement. Of note was the fact that the quality of food on the general menu was reported to be acceptable in all facilities based on patient/resident satisfaction data and confirmed by the majority of clinicians.

Issues impacting nutrition treatment and monitoring include the following:

- at two hospitals (one regional tertiary, one regional principal referral) food service constraints impacted on the provision of a range of ordinary food items to prevent and correct malnutrition. This increases reliance on supplements and does not align with the guidelines by NICE⁶ and The Council of Europe.⁷
- at two hospitals (one regional principal referral, one medium regional) there were inadequate food service standards for high protein diets
- here were limited menu options for patients/residents requiring texture modified diets (soft, puree etc)
- disruption of meals for rounds, diagnostic/other procedures was reported as an issue in the large, principal referral and tertiary hospitals, but was not

- reported as an issue in the medium, small or remote hospitals or residential care facilities
- lack of preparation and setting-up for meals was frequently reported in larger hospitals. In contrast residential care facilities had good systems for meal preparation and emphasis on feeding. One metropolitan tertiary hospital had implemented a multi-disciplinary project to address setting up for meals, and one hospital had assigned the task of meal set-up and allocating staff to assist with feeding to an assistant-in-nursing
 - lack of assistance with feeding presented a challenge in all facilities. One residential care facility used volunteers to assist with feeding. These volunteers have been trained and are deemed competent to assist with feeding. In another residential care facility a trial was planned to increase the number of available staff to provide feeding assistance using wards persons and diversional therapists
 - lack of access to food and prolonged fasting for theatre/tests with frequent cancellations. This was reported in *all* large, principal referral and tertiary hospitals. This was also reported at one residential care facility in relation to residents attending ongoing, off-site haemodialysis
 - monitoring of food intake. While 95% of clinicians who completed the written survey agreed with the statement “there should be ongoing checks of whether a resident at nutritional risk is achieving a desirable intake”, many clinicians recognised there are inadequate systems to identify patients who are eating little or nothing. During the clinician interviews a number of nurses commented that meal trays are removed too quickly before they have time to assess food intake. Dietetic assistants employed at five facilities (three metropolitan, one regional principal referral and one large regional hospital) take on a role of routinely monitoring food intake
 - a poor completion rate of food intake records in hospitals, which is likely due to a lack of role clarity in deciding when to use these records, and conflicting priorities for available staff to complete them. In the residential care facilities, three day food intake records are routinely undertaken on admission and annually
 - an absence of policies on nutrition management, including indications for tube feeding, to inform team decision making. Only five of 11 hospitals have up-to-date policies that provide clear indications for nutrition management. At only one of the residential care facility, commencement of enteral feeding is considered following discussion of prognosis and quality of life. However, residents are accepted to all facilities with established PEG feeding
 - while most facilities had either policies or work unit guidelines on nasogastric tube insertion and management, many require updating based on current evidence, notably in relation to confirmation of tube placement and aspiration of nasogastric tubes. The routine reliance on radiological confirmation of tube placement was cited by many clinicians as a barrier to tube feeding
 - no facility had a team to consult regarding feeding and nutrition with the exception of Parenteral Nutrition Teams (four hospitals)

Clinician awareness of the clinical impact of inadequate food intake was high. At all hospitals and two of the three residential care facilities, between 13 to 56% of clinicians per facility (37% overall) agreed with the statement “in my unit the nutritional intake of patients/residents is so inadequate (due to nil by mouth or poor intake) that it has clinical implications”. There was no trend by facility, including facilities with systems for

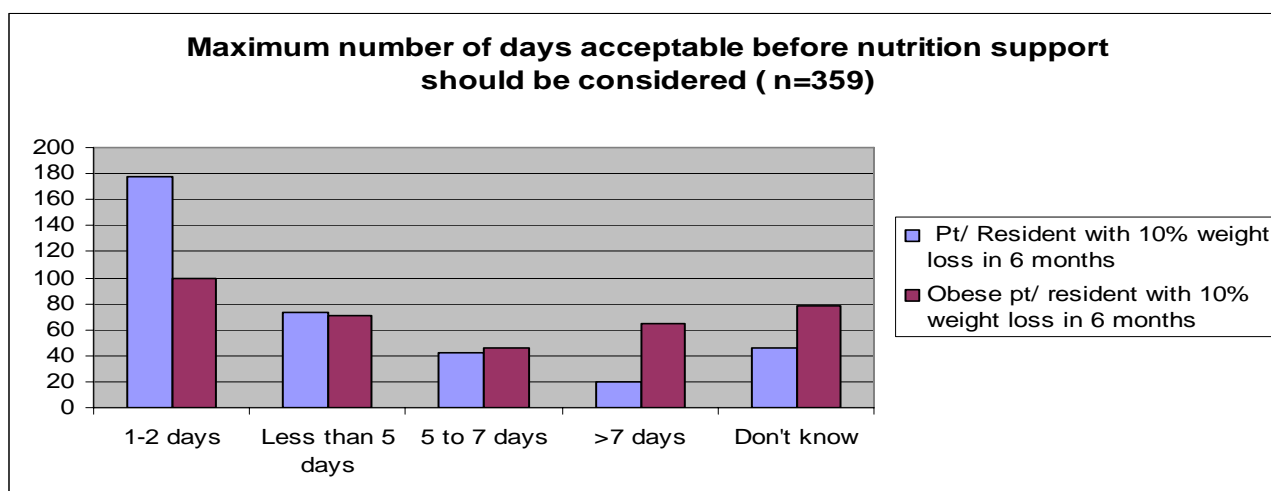
routinely completing malnutrition screening on admission. This likely reflects the numerous other barriers to achieving adequate food and fluid intake.

3. Care across the continuum

With the exception of one medium regional hospital, fewer than half of hospital clinicians agreed with the statement “follow-up nutrition care is routinely considered as part of discharge planning”. Information on nutritional status is not routinely included in either medical or nursing discharge summaries, with the exception of information on diet and feeding assistance is routinely included in nursing discharge reports. Follow-up services were usually available for patients who require ongoing nutrition management, although in regional and rural areas these frequently require attendance at the hospital or telephone consultation, due to the low numbers of clinicians with expertise to monitor nutrition management in the community and some restrictions excluding service provision to malnourished patients (eg some chronic disease services).

4. Governance

- while six of the 14 facilities had nutrition steering committees comprising representatives from a number of disciplines &/or residents, no facilities have a committee that includes medical and pharmacy representatives
- clinicians in residential care facilities considered they are adequately equipped to identify malnourished residents and those who need intensive nutrition management . In contrast, hospital clinicians frequently agreed with the statement “ I find it difficult to identify malnourished patients” including 17% of medical staff, 25% of hospital nurses and 24% of hospital allied health clinicians
- the written survey highlighted gaps in attitudes and awareness to malnutrition management in obese patients/residents. More clinicians deemed it acceptable to delay *consideration* of intensive nutrition management beyond 7 days in obese patient/resident who has unintentionally lost 10% of their body weight over 6 months (20 verses 64 would wait more than 7 days).



An unintentional weight loss of 10% in 6 months indicates malnutrition¹. This illustrates the misconception that malnutrition cannot be present in patients with a high BMI . Given that morbidly obese patients are at increased risk of pressure ulcers, withholding intensive

nutrition management in malnourished, obese patients/residents exacerbates the risk of developing pressure ulcers and will delay healing and recovery

- regular education sessions were scheduled to medical and/or nursing staff in only 6 of the 14 facilities.

1. Recommendations for Health Service Districts

1.1. Malnutrition screening

- 1.1.1. implement systematic malnutrition screening on admission. This may be best affected by incorporating a malnutrition screening tool into a standard admission risk assessment form that includes other risk assessment tools such as the Falls Risk Assessment Tool, and the Waterlow Pressure Ulcer risk assessment tool, and is completed by clinical staff on admission. A dysphagia screening tool, should be also incorporated into the admission risk assessment tool given the link between malnutrition and dysphagia
- 1.1.2. implement efficient referral pathways for nutrition assessment and treatment for those identified at risk of malnutrition
- 1.1.3. District Directors of Nursing should ensure that food and fluid intake of patients/residents meets best practice nursing standards, including monitoring of food and fluid intake and routine weight monitoring (eg on admission, weekly in acute and sub-acute areas, monthly in non-acute areas) . The efficient processes in place at residential care facilities for weight monitoring and prioritising food and fluid intake may inform the significant attitudinal and process changes required in Queensland Health hospitals
- 1.1.4. implement systematic procedures to identify nutritional decline during hospitalisation via rescreening for malnutrition risk, routine monitoring of weight and food and fluid intake with clear referral pathways for patients/residents who are losing weight and/or eating poorly
- 1.1.5. assess outpatient services to determine whether malnutrition screening should be implemented and/or expanded for high-risk groups at the first clinic presentation eg. elderly, surgical pre-admission, oncology. Ensure referral pathways for those identified as at nutrition risk are timely and efficient
- 1.1.6. implement quality activity projects to assess compliance and accuracy of malnutrition screening, and efficiency of referral pathways, for example concurrently during facility-wide pressure ulcer audits

1.2. Malnutrition assessment, treatment and monitoring

- 1.2.1. engage clinicians to develop a multi-disciplinary team approach to feeding and nutrition, with acknowledged responsibility by all team members
- 1.2.2. based on areas of highest need, implement and evaluate systems to
 - 1.2.2.1. improve access to appropriate menus and availability of mid-meal food and fluids
 - 1.2.2.2. reduce disruption of meals for rounds, diagnostic and other procedures*
 - 1.2.2.3. improve set-up for meals and assistance with feeding*
 - 1.2.2.4. improve monitoring of food and fluid intake*
 - 1.2.2.5. improve access to food including after hours and between meal-time access to food following cancellation of theatre and/or tests

*For example, investigate the “Protected meal-times” project that have been implemented in the National Health Service, United Kingdom

- 1.2.2.6. for facilities that do not have access to an on-site dietitian, establish formal service level agreements for advice

- 1.2.2.7. implement the use of validated nutrition assessment tools to standardise practice and maximise case-mix funding by diagnosing malnutrition

1.3 **Care across the continuum:**

Implement sustainable systems to routinely include information on nutritional status in discharge summaries, to facilitate communication with primary care providers

1.4 **Governance**

Implement effective governance via the establishment of a multi-disciplinary nutrition steering committee at each facility with representation from medical, food services, nursing, dietetic, pharmacy and speech pathology staff.

Terms of reference should include

- food service quality and safety
- overseeing development of policies and procedures relating to malnutrition screening and assessment, nutrition management and care across the continuum
- informing role clarity in nutrition management and addressing role delineation and skill mix in the facility including malnutrition screening on admission, weighing at fixed intervals, assessment of nutritional status, nutrition treatment including roles liaison with family or carers in decision making about nutrition treatment and support, assistance with feeding, monitoring of food intake and documentation
- overseeing projects to improve food intake and access to food
- facilitating and overseeing a continuous education program on general nutrition and techniques of nutritional support for all staff involved in feeding

2 **Recommendations for the state-wide food service steering committee**

Food supply should be addressed at a broader level

- apply leverage to reduce budgetary constraints and improve access to high quality, nutrient dense foods
- advocate to improve texture modified menu options which better meet the patient/resident needs and particularly during the next Standing Offer Arrangement tender process
- this committee should develop policies incorporating nutrition targets and menu plans for patients/residents requiring high protein/ high energy diets to prevent and treat malnutrition, including the provision of food and fluid between meals, with consideration of supper

3 **Recommendations for the Patient Safety Centre**

3.1 communicate the results and recommendations of this report to the Health Service Districts, the Office of the Chief Nursing Officer and the State-wide Food Service Steering Committee to raise awareness of patient outcomes and organisational risk associated with malnutrition in Queensland Health

3.2 oversee the implementation and evaluation of the

- 3.2.1 development of a Queensland Health policy on identification, management & prevention of malnutrition
- 3.2.2 development of sample malnutrition management policies incorporating indications for nutrition management to assist with multi-

- disciplinary team decision making, and up-to-date enteral tube-feeding policies based on current evidence, that can be modified for individual health service districts or facilities as required
 - 3.2.3 based on the identified gaps in clinician knowledge and awareness of malnutrition, develop, implement and evaluate training and education materials
- 3.3 consider a Patient Safety Centre portfolio for malnutrition prevention, similar to the current state-wide Pressure Ulcer and Falls prevention portfolios, to co-ordinate implementation of policies and procedures and guidelines related to identification and management of malnutrition, engage in the Standing Offer Arrangement tender process for relevant equipment (eg. scales) and to provide advice and support for Health Service Districts
- 3.4 it is the view of the Steering Committee that residential care facilities have well established, mandated systems in place to identify nutritional decline over time via routine weight monitoring, and further that residential care facilities place a high duty of care on food and fluid intake. These elements form part of the accreditation process. In light of this, we recommend that the Patient Safety Centre should advocate on behalf of Queensland Health to make nutrition risk management an ACHS criteria
- 3.5 assist with establishing partnerships with the Safe Practice Medication Unit to achieve improvements in recording of weight for Queensland Health inpatients and streamlining of documentation to avoid duplication of weight recording in bed charts

Acknowledgements

Project Officer Jan Hill

Project Manager Merrilyn Banks

Project Steering Committee

Dr Alison Mudge	Physician – Internal Medicine and Aged Care, Royal Brisbane and Women’s Hospital
Dr Maree Ferguson	Director, Nutrition & Dietetics, Princess Alexandra Hospital
Merrilyn Banks	Director, Nutrition & Dietetics, Royal Brisbane and Women’s Hospital
Cheryl Frank	CNC, Wound Management, Gold Coast Hospital
Michelle Holland	Pressure Ulcer Prevention Program, Patient Safety Centre
Prue McRae	District Safety & Quality Unit, Royal Brisbane and Women’s Hospital
Kaylene Woollett	Assist Director Nursing, Surgical Services, Royal Brisbane and Women’s Hospital
Nancy Magazinovic	Executive Director/ Nursing Director, Acquired Brain Injury Unit, Jacana

Appendix 1: Framework for assessment: Investigating malnutrition practices project

