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AuSPEN 2024 Abstracts

2024 AuSPEN ABSTRACT PUBLICATION IN CLINICAL NUTRITION ESPEN

The Australasian Society of Parenteral and Enteral Nutrition (AuSPEN) is the leading professional society in Australia and New Zealand for a multidisciplinary approach to clinical nutrition, promoting high standards in the practice of parenteral and enteral nutrition across the continuum of care.

The 2024 AuSPEN Scientific Conference themed 'The Many Faces of Clinical Nutrition' was held in Brisbane, Australia in November to celebrate the many faces and facets of clinical nutrition, from consumer led research and the future directions of nutrition care to specialist workshops on paediatrics and intestinal failure, to name a few. With support from ESPEN, for the second year, conference abstracts accepted for oral presentations will now be published in Clinical Nutrition ESPEN.

ECONOMIC IMPACT OF INTESTINAL FAILURE – A PATIENT PERSPECTIVE

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Background: Intestinal Failure (IF) is a complex and often life-long illness, requiring home parenteral and/or enteral nutrition, various medications, dietary changes and input from multiple healthcare specialists. Research to date has focused on the cost of IF from a health care perspective. The aim of this study is to quantify the economic impact of intestinal failure from a patient perspective.

Methods: This was a cross-sectional study. A tailored questionnaire was developed, piloted and administered to adult IF patients within a quaternary hospital in Sydney, Australia. The questionnaire collected participant demographic information and out-of-pocket expenses (OOPE) spent on hospitalisations, general practitioner, other specialist and allied health appointments, tests and examinations, medications, stoma care, special foods and drinks and enteral nutrition in a 12-month period. Data was analysed using descriptive statistics (median and range).

Results: A total of 13 participants responded to the questionnaire. The median (range) OOPE in a 12-month period was AUD6098.80 (AUD3170.25 - 45 744.20); 24.4% of annual reported income. OOPE for patients living in metropolitan NSW were higher than those living in regional or rural NSW (AUD6537.77 versus AUD6098.80). Participants with a motility disorder spent more on total OOPE than those that did not have a motility disorder (AUD7178.27 versus AUD3905.10). OOPE for medications was the highest individual cost per year, AUD2160.00 (AUD820 - 6000) and OOPE for tests and examinations was the lowest, AUD68.00 (AUD3.40 -2779.50). Average potential lost income was AUD62 309.95 per annum.

Conclusion: This is the first study to show the significant economic burden for people living with IF and quantify potential loss of income related to their illness. IF services need to be aware of the financial burden this patient group experiences and ensure they are supported to access financial aid where eligible.

Funding source: This research did not receive any funding.

Conflict of interest: The authors declare that they have no conflicts of interest.

HOW OFTEN IS INITIATION OF PARENTERAL NUTRITION DELAYED? A SINGLE CENTRE STUDY

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Background: Parenteral nutrition (PN) is recommended when oral or enteral nutrition fails to meet 50% of the nutritional requirements for seven days in previously well-nourished or five days in malnourished patients. The study aims to analyse the number of days patients experienced inadequate nutrition before being referred for PN in Auckland City Hospital.

Methods: All adult patients during the 2022 year were identified from the Nutrition Support Team (NST). Individual data were extracted from clinical records including age, sex, referral specialty, admission nutritional state (according to the Global Leadership Initiative on Malnutrition (GLIM) criteria), and duration of insufficient nutritional intake before referral.

Results: Out of 264 patients initiated on PN, the majority (59%, median age 61 (47-70) years) were male. On average, patients experienced 6.49±3.38 days of inadequate nutrition before NST referral. Pacific patients (38%) were most likely to experience prolonged delays (>7 days) compared to other ethnic groups. Delays varied significantly across specialties, with Otorhinolaryngology (5.33 days) and Urology (11.8 days) experiencing the shortest and longest waits, respectively. Key referrers were General Surgery (6.98 days), Oncology (8.42 days), and Critical Care (5.67 days). Of the 186 (74%) patients with complete GLIM data, 34% were malnourished at referral. However, only 16 (25%) of these received timely referral, and merely 56% of these received dietetic consultation before referral. In contrast, 93 (76%) of the 123 well-nourished patients adhered to referral guidelines. Moreover, 62% of 186 patients observed had lost an average of 10.2±8.1% body weight, decreasing from a mean well weight of 80.7±21.9 kg to 72.2±20.0 kg at assessment.

Conclusion: Significant delays in PN initiation across various medical specialties highlight the need for more efficient hospital protocols to ensure timely nutritional intervention, improving adherence to guidelines and patient outcomes.

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Conflict of interest: The authors declare that they have no conflicts of interest.

PERI-OPERATIVE NUTRITION SERVICE REVIEW IN SARCOMA SURGERY OF THE PELVIS, ABDOMINAL AND RETROPERITONEUM

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Background: There are currently no specific recommendations for standard nutrition care for patients with soft tissue sarcoma undergoing surgery of the pelvis, abdominal or retroperitoneum. The aim of this study was to review nutrition services at a quaternary hospital in Sydney, Australia, to determine service gaps for patients undergoing surgery for sarcoma of the pelvis, abdomen or retroperitoneum.
Methods: This was a single-centre retrospective cohort study. Patients over 18 years undergoing surgery for primary sarcoma between November 2020 and December 2023 with pre-operative weight recorded were included. Pre- and post-operative nutrition status, pre- and post-operative weight, post-operative complications and length of stay were collected. Statistics are reported as median (IQR), and Mann-Whitney U Test was used to compare differences between groups.
Results: Seventy-nine patients were included, 38 male and 41 female with median age 59 years (IQR 49-73). Length of post-operative stay was 14 days (IQR 9-22), and length of surgery was 342 minutes (IQR 217-541). Twenty patients were assessed by a dietitian pre-operatively and 33 patients had a nutrition assessment post-operatively, with 40% malnourished in both groups. Patients assessed as malnourished pre-operatively had a significantly longer length of stay compared to well-nourished patients (Median 24 days compared to 14.5 days, $p = 0.013$). Fifty percent of all patients required parenteral and/or enteral nutrition post-operatively. Thirty-five patients had a post-operative complication, 16 (20%) of these had a Clavien-Dindo classification ≥ 3.
Conclusion: Soft tissue sarcoma surgery is lengthy and comes with significant complications. This study highlights a service gap within a nutritionally vulnerable patient group. It is imperative nutrition assessment and intervention is included as an essential aspect of clinical care. Further research is required to assess the association between pre-operative nutrition and post-operative clinical outcomes in sarcoma.
Funding source: This research did not receive any funding.
Conflict of interest: The authors declare that they have no conflicts of interest.

BODY COMPOSITION CHANGES AND THE IMPACT OF OBESITY DURING SURGICAL TREATMENT FOR OESOPHAGOGASTRIC CANCER

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Background: Limited prospective studies evaluate body composition changes throughout the curative treatment pathway for oesophagogastric (OG) cancer. We aimed to measure longitudinal body weight and composition changes and describe variations according to body mass index (BMI).
Methods: This prospective observational study included OG cancer surgery patients from a single tertiary hospital (2018-2021). Skeletal muscle (SM) and total adipose tissue (TAT) area were assessed using computed tomography images at diagnosis (T1), preoperatively after neoadjuvant treatment (T2), and 12 months postoperatively (T3). Low skeletal muscle index (SMI, cm^2/m^2) was defined using published thresholds. BMI groups were categorised at diagnosis as $\geq 30 kg/m^2$ (obese) or $<30 kg/m^2$ (non-obese). Two-way mixed ANOVA assessed change in body composition variables over time.
Results: There were 50 patients; 62% male, mean age 64 years (±10), and 28% had obesity at diagnosis. Mean weight reduced significantly (T1, 84.6kg vs T3, 72.1kg, $p<0.001$). During neoadjuvant treatment, SM reduced (T1, 152.7 cm^2 vs T2, 142.4 cm^2, $p<0.001$) and TAT was stable. Postoperatively, TAT loss was predominant (T2, 357.7 cm^2 vs T3, 224.4 cm^2, $p<0.001$) with insignificant SM loss (T2, 142.4 cm^2 vs T3, 133.6 cm^2, $p=0.064$). The prevalence of low SMI increased during neoadjuvant treatment (T1, 33% to T2, 49%, $p=0.02$) but not postoperatively (T3, 54%, $p=0.21$). At 12 months, patients with obesity had greater weight loss than non-obese (18.4 ± 4.3% vs 11.4 ± 1.3%, $p=0.048$), but the proportion of SM and TAT loss was comparable between groups.
Conclusion: Weight loss during OG cancer treatment is significant. Skeletal muscle loss occurs mainly during neoadjuvant treatment, while postoperatively, adipose tissue loss is predominant. Patterns of muscle and adipose tissue changes apply irrespective of baseline BMI. Body composition should be considered throughout treatment, focusing on preventing muscle loss.
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Conflict of interest: Lisa Murnane has received an honorarium from Fresenius-Kabi and Nestle Health Science outside of the submitted work.

COMPARING THE PERFORMANCE OF THREE SARCOPENIA DEFINITIONS FOR PREDICTING ADVERSE EVENTS PRIOR TO LIVER TRANSPLANT

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Background: Sarcopenia is a syndrome of severe muscle wasting, associated with adverse outcomes related to liver transplantation (LT). There are several approaches used to identify sarcopenia. We aimed to investigate the prevalence of sarcopenia using three different criteria and determine how these performed in relation to clinical outcomes.
Methods: The study included 237 adults with cirrhosis referred for LT. Sarcopenia was identified using 1) CT-defined; and the 2) original and 3) updated European Working Group on Sarcopenia in Older People criteria (EWGSOP1 and 2). Logistic regression was used to estimate odds ratio (OR) and 95% confidence intervals (95%CI) for the relationships between sarcopenia and receiving a LT; unplanned admissions pre-LT; surgical complications and length of stay for the LT admission. Kaplan-Meier, Cox-proportional hazards models and competing risk analysis explored the impact of sarcopenia on receiving a LT and unplanned admissions. The area under the receiver operator curve (AUC) determined the predictive utility of the criteria.
Results: The median age was 58 [IQR 50-62] years, 75% were male, and alcohol-related liver disease was most prevalent (38%). The prevalence of CT-defined sarcopenia (52%) was more than twice and four-fold that of EWGSOP1- (22%) and EWGSOP2-defined (11%) sarcopenia respectively. EWGSOP1-defined sarcopenia demonstrated a significant association with unplanned admissions (OR 1.88 95% CI 1.00-3.51, $p=0.04$), and sooner (Kaplan-Meir analysis, $p=0.01$), but was not significant after adjusting for confounders. No criteria had superior predictive utility for clinical outcomes, with identical moderate AUCs for unplanned admissions (0.70), and similar weak AUCs (≤ 0.55) for the likelihood of receiving a LT.

Conclusions: Sarcopenia in patients undergoing LT evaluation is prevalent. EWGSOP criteria appear to offer no advantage over CT-only criteria in identifying patients at increased risk of adverse LT outcomes. Bedside measures of muscle function may be of benefit in tracking the effectiveness of interventions targeting sarcopenia.
Acknowledgements: Thank you to the Queensland Liver Transplant Service staff for their assistance during the study.
Funding source: The first author, Johnston received a living stipend scholarship during her PhD of which this study was part of.
Conflict of interest: The authors declare that they have no conflicts of interest.

IMPROVING ENERGY AND PROTEIN INTAKE VIA AN ORAL NUTRITION SUPPORT PATHWAY IN THE INTENSIVE CARE UNIT AND BEYOND

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Background: Nutrition research in the intensive care unit (ICU) is shifting from the acute phase of illness to the recovery phase. Current research suggests these patients are not meeting their nutrition requirements, however there have been no published studies to date looking to improve this. Our study aimed to increase the energy and protein intake of patients in the ICU and beyond onto the wards via the implementation of a multidisciplinary, individualised oral nutrition support pathway.
Methods: We conducted a prospective single-centre, pre-post interventional study in a 10-bed ICU comprising of 112 patients. Consecutively admitted patients who were on an oral diet and expected to be in the ICU for $\geq$ 48hours were included. Adequacy of energy and protein intake expressed as either the % of estimated energy requirements (EER) and estimated protein requirements (EPR) met or proportion of patients meeting $\geq$ 80% of their energy and protein requirements was compared pre and post-implementation of a multidisciplinary, individualised oral nutrition support pathway. Data were analysed using SPSS version 28 and STATA version 18.
Results: Post-intervention, there was a significant increase in % of EER and EPR being met with a mean percentage change of 34% for energy (pre: 58%, 95% CI: 50 − 67; vs post: 92%, 95% CI: 84 − 101; p <0.001) and 28% for protein (pre: 52%, 95% CI: 44 − 61; vs post: 80%, 95% CI: 72 − 88; p <0.001). The proportion of patients meeting $\geq$80% of EER significantly increased post-intervention (pre: 19.6% vs post: 58.8%, p <0.001) as did those meeting $\geq$80% of EPR (pre: 12.5% vs post: 46.4%, p <0.001).
Conclusion: The implementation of a multidisciplinary, individualised oral nutrition support pathway significantly improves the energy and protein intake of patients both within ICU and beyond onto the wards.
Acknowledgements: We would like to thank the Nutrition and Foodservices department and the Intensive Care Unit at Recliffe Hospital for participation in the study.
Funding source: This work was supported by the Redcliffe Hospital Private Practice Trust Fund Advisory Committee through a research grant.
Conflict of interest: The authors would like to declare that the Fortisip Compact Protein supplements used in the study were supplied without charge by Nutricia.

NUTRITION INTAKE AND RECOVERY OUTCOMES IN CRITICALLY ILL PATIENTS REQUIRING NON-INVASIVE FORMS OF RESPIRATORY SUPPORT

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Background: Non-invasive forms of respiratory support in the Intensive Care Unit (ICU), including high-flow nasal cannula (HFNC) and non-invasive ventilation (NIV), are increasing. Despite this, reporting of nutrition intake or recovery-based outcomes in this population is limited. This study aimed to quantify nutrition intake, and physical and functional outcomes for patients receiving HFNC/NIV within the ICU.
Methods: A single-centre, prospective, observational study recruited adult ICU patients within 48-hrs of commencing HFNC/NIV. Demographic data was extracted from electronic medical records. Change in Quadricep Muscle Layer Thickness (QMLT) using ultrasound from study inclusion to day 7 was measured (primary outcome). Nutrition intake was assessed using 24-hr recall and food record charts at study inclusion and day 7. Functional capacity (Barthel Index) was assessed at study inclusion (pre-ICU function) and at day 90, and quality of life (EQ-5D-5L utility index) at day 90. Data are n (%) or mean±standard deviation. Changes in QMLT and nutrition intake were compared using paired sample t-tests, with P<0.05 considered significant.
Results: Primary outcome data was available for 28 of the 42 patients recruited: 64±13y, 17 (61%) male, BMI 29.1±9.0kg/m^2, APACHE II score 17±5. QMLT reduced from 2.41±0.87 to 2.12±0.73cm (mean difference: -0.29cm (95% CI -0.44, -0.13), P=0.001). Nutrition intake increased from 1735±1283 to 5448±2858kJ and 17.4±16.6 to 60.9±36.8g protein (both P<0.001). Barthel Index was 87±20 at baseline and 91±15 at day 90 (out of 100). Quality of life was impaired at day 90: 0.64±0.23 (best health=1.0).
Conclusion: In critically ill patients receiving HFNC/NIV, nutrition intake improved over 7 days, yet QMLT significantly decreased. Impaired quality of life was observed at day 90.
Funding source: This research was funded by the University of Adelaide Faculty Emerging Leaders Development Award. EVS is funded by an Australian Government – Research Training Program (RTP) Scholarship and a Central Adelaide Local Health Network – Dawes Scholarship. MS is supported by a University of Adelaide Research Scholarship.
Conflict of interest: The authors declare that they have no conflicts of interest.

TO KNOW IS TO (START TO) UNDERSTAND: WHAT'S IMPORTANT TO PARENTS OF CHILDREN WITH TEMPORARY FEEDING TUBES AND WHERE DO THEY FIND THEIR SUPPORT?

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Background: Temporary feeding tubes, such as nasogastric tubes, are essential for providing nutrition to children who cannot sustain adequate oral intake. Despite their necessity, parents express apprehension about temporary feeding tube placement. This study explored parents' priorities and support sources for their child's temporary feeding tube.
Methods: Parents of children with temporary feeding tubes participated in semi-structured interviews post-placement. They responded to questions about what was important to them, ("What are the things that are important to you and your child in this situation of having the feeding tube?") and their sources of support ("Where will you go to get support about your child's feeding tube?"). Inductive content analysis assessed response frequencies based on parent priorities and support sources.
Results: Thirty-four parents were interviewed. The median time since temporary tube placement was 1 month (range 1-10 months). Six categories were derived regarding what was important to parents, with some parents providing answers across more than one category.Important things identified included; nutrition (n=22, 65%), tube position (n=6, 18%), child comfort (n=7, 21%), tube use for medication (n=2, 6%), weaning off the tube (n=2, 6%), and affirming the tube was the right decision (n=1, 3%). Sources of support included hospital clinicians (n=27, 79%), family (n=7, 21%), general practitioners (n=2, 6%), and Facebook (n=1, 3%). One parent reported having no support.

Conclusion: This research begins to explore what parents of children with temporary feeding tubes consider important and identifies their support sources. The findings suggest that clinicians should give precedence to discussing nutrition, tube management, and the child's comfort with parents and clarify the support options available for families.
Acknowledgement: The authors would like to acknowledge Health Translation Queensland, which provided a microgrant to fund the input of health consumers in designing the questions for this study.
Funding source: This research did not receive any funding, however a microgrant from Health Translation Queensland allowed for health consumers to be involved in this research study design.
Conflict of interest: The authors declare that they have no conflicts of interest.

A RETROSPECTIVE REVIEW OF ZINC DEFICIENCY IN CHILDREN WITH ULCERATIVE COLITIS ON INFLIXIMAB THERAPY

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Background: Children with inflammatory bowel disease (IBD) may have malabsorption, diarrhoea and restricted diet, leading to risk of micronutrient deficiencies [1]. In March 2021, our unit changed practice, to routinely monitor micronutrients (6-monthly) in all patients with moderate to severe ulcerative colitis (UC) on infliximab. We sought to assess zinc deficiency and supplementation in children in this cohort, and describe changes over time.
Methods: A retrospective chart review was performed on children with UC on infliximab at a tertiary paediatric centre (March 2021 to May 2024), using electronic medical records. Data included demographics, micronutrient levels (zinc, vitamin D, active vitamin B12, folate), CRP and corresponding time since commencing infliximab. Micronutrient measurements when CRP level >10 were excluded (potential acute phase reactant effect). Data were summarised using descriptive statistics and the association between zinc level and time since starting infliximab was analysed using quantile regression.
Results: Zinc levels (n=77) measured in 24 children aged 9.5-19.1 years (n=18 male) showed 51% of zinc levels below reference range. The association between zinc level and time (Table 1) revealed a median increase of 0.1 umol/L per month since starting infliximab (p=0.06). Only 3 patients received zinc supplementation.
Conclusion: Zinc deficiency is common in children with UC on infliximab, with low rates of supplementation identified. Regular monitoring and improved awareness for clinicians is important to optimise nutritional status and aid timely correction.
References: 1. Zupo, R., et al., *Prevalence of Zinc Deficiency in Inflammatory Bowel Disease: A Systematic Review and Meta-Analysis.* Nutrients, 2022. 14(19): p. 4052.
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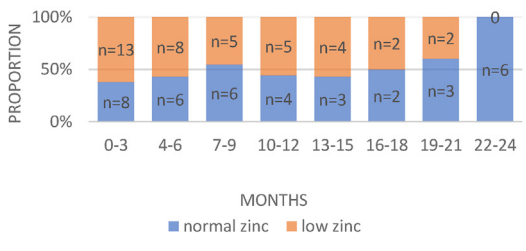
Conflict of interest: The authors declare that they have no conflicts of interest.

TABLE 1: PROPORTION OF LOW AND NORMAL ZINC LEVELS BY MONTHS SINCE INITIAL INFUSION



THE EFFECTS OF MEDITERRANEAN DIET ON BODY COMPOSITION OUTCOMES IN ADULTS WITH CHRONIC DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS OF CLINICAL TRIALS

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Background: The Mediterranean diet (MedDiet) is well known for its benefits in the prevention and management of chronic diseases. MedDiet prescription may lead to improved body composition, assisting in the management of chronic diseases. However, this has not been comprehensively assessed. This systematic review and meta-analysis aims to assess the effects of MedDiet interventions overall, hypocaloric and isocaloric on changes in body composition in adults with chronic disease.
Methods: In accordance with PRISMA guidelines, four databases (MEDLINE, EMBASE, ProQuest, CINAHL) were systematically searched from inception to December 2023. Articles included randomised controlled trials (RCTs) that examined the effect of MedDiet interventions on changes in body composition outcomes (body weight, waist circumference [WC], body mass index [BMI], body fat, lean mass, visceral adipose tissue [VAT] or subcutaneous adipose tissue) in adults with chronic disease. Standardised mean differences (SMD) were pooled using random-effects models for MedDiet, hypocaloric MedDiet and isocaloric MedDiet interventions compared with controls.
Results: Nineteen RCTs (n=4,601) were included. In the meta-analysis, MedDiet interventions showed significant reductions in BMI [SMD= -0.17 kg/m^2 (95%CI: -0.29, -0.05); P=0.006] and VAT [SMD= -0.12 g (95%CI: -0.22, -0.02); P=0.02]. Significant reductions in BMI were also found in hypocaloric MedDiet interventions [SMD= -0.25 kg/m^2 (95%CI: -0.42, -0.08); P=0.003] and VAT [SMD= -0.12 g (95%CI: -0.22, -0.02); P=0.02]. Isocaloric MedDiet interventions were associated with reductions in WC [SMD= -0.16 cm (95%CI: -0.32, -0.00); P=0.05]. None of the other body composition outcomes reported significant results.
Conclusion: These findings indicate that MedDiet overall, isocaloric and hypocaloric MedDiet interventions may be effective in improving body composition in adults with chronic disease.
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Conflict of interest: The authors declare that they have no conflicts of interest.

SCREENING, DIAGNOSING AND TREATING MALNUTRITION IN THE HOSPITAL SETTING: A LARGE-SCALE POINT PREVALENCE STUDY

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Background: Malnutrition in the hospital setting is associated with poor health outcomes and increased healthcare costs. However, evidence suggests hospital malnutrition is insufficiently screened, diagnosed and treated. Using multi-year point prevalence data, this study aimed to describe the prevalence of malnutrition in the acute hospital setting, the accuracy of the Malnutrition Universal Screening Tool (MUST) in identifying patients at high risk of malnutrition, and the frequency with which malnourished patients were not seen by a dietitian (missed referrals).
Methods: A one-day point prevalence study was undertaken annually at three sites of a metropolitan Melbourne health service from 2016 to 2019. All inpatients were assessed for inclusion. Survey teams consisting of a

dietitian and two nurses completed a retrospective review of patient medical records and undertook a bedside assessment. The MUST score and malnutrition assessment were completed on audit day. The diagnostic criteria for malnutrition was based on the International Classification of Diseases, 10th Revision (ICD-10).

Results: A total of 3,150 patients were surveyed across four years. The prevalence of malnutrition was 26% (n=817). Sixty-three percent of malnourished patients had been identified by the MUST as being at high malnutrition risk, and 19% as medium malnutrition risk. Thirty-two percent (n=259) of malnourished patients had not been seen by a dietitian during their admission due to missed referrals.

Conclusion: Accurately identifying malnutrition risk is an important first step in addressing malnutrition, affecting more than a quarter of patients in this study. The MUST tool identified just under two-thirds of malnourished patients as high risk, meaning that relying solely on this tool will result in missed dietetic referrals. Strategies to improve screening, diagnosis and dietetic referral for malnutrition are needed, to improve health outcomes and reduce financial costs for health services.

Funding source: This research did not receive any funding.

Conflict of interest. The authors declare that they have no conflicts of interest.

SUPPORTING HIGH-QUALITY NUTRITION IN CANCER CARE WITH A MALNUTRITION GOVERNANCE TOOLKIT

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Background: Recent Victorian Health Service cancer malnutrition point prevalence data (2022) indicates 14% of patients are malnourished with only 57% receiving dietetic care. Patients from health services with strong nutrition governance systems are more likely to receive individualised nutrition care from a dietitian. In 2014, an evidence-based Malnutrition Governance Toolkit (MGT) was developed to guide system-wide practice improvements and embed quality and safety accreditation standards. This study aimed to update the MGT and evaluate useability and acceptability in clinical practice.

Methods: End-users (all Victorian nutrition and dietetics managers from hospital and community health services) were invited to complete a study-specific online survey to understand MGT content needs. An expert group was convened (n=7) to make consensus decisions regarding content updates. Six health services piloted the updated MGT and completed a study-specific online questionnaire, incorporating items from the Theoretical Framework of Acceptability and System Useability Scale (SUS).

Results: Thirty-three acute and community health services (31% response rate) completed the end-user survey. 41% of services did not have a malnutrition policy or multidisciplinary nutrition care committee. 26% had no established auditing programs focused on malnutrition care reporting. Key areas for content updates were identified. Six acute and community health services completed the questionnaire (100% response rate). The updated toolkit was highly acceptable, 100% of respondents reported 'completely acceptable' or 'acceptable', the average SUS was 84 (>68 considered above average) and all intend to use beyond the testing period. The toolkit is freely available; https://www.petermac.org/research/clinical-research/clinical-research-by-centre/victorian-cancer-malnutrition-collaborative-vcmc/malnutrition-governance-toolkit.

Conclusion: The updated MGT is highly acceptable and usable across acute and community health settings. Sharing resources and innovations via the MGT will support malnutrition governance practices across health settings, to improve nutrition and clinical cancer care.

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CHANGES IN ENERGY EXPENDITURE AND BODY COMPOSITION FOLLOWING ALLOGENEIC STEM CELL TRANSPLANT

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Background: Allogeneic haematopoietic stem cell transplant (SCT) is associated with major nutrition-impacting side effects. There is limited information on energy expenditure to guide nutrition support decisions; and body composition alterations may further impact utility of prediction equations. This study aimed to evaluate resting energy expenditure and body composition, from pre-SCT conditioning until 100 days post-SCT.

Methods: Thirty-four adults undergoing allogeneic SCT participated (18-67 years, 56% male, 62% acute leukaemia, BMI 27.0±5.7kg/m^2). Body weight and resting energy expenditure (mREE, fasting state, Cosmed Fitmate^R) were measured at five timepoints (pre-conditioning [t1], pre-SCT [day -2 to 0, t2]; days 5-10 [t3], 15-30 [post-engraftment, t4] and 90-100 [t5]. Fat-free mass (FFM) was measured at t1, t4 and t5 (seca^R multi-frequency bioelectrical impedance analysis). mREE was expressed as absolute, standardised for weight and FFM, and %predicted BMR (Schofield equation, mREE%predBMR). Linear mixed modelling assessed changes over time, accounting for repeated measures.

Results: Absolute mREE increased after conditioning then declined, however mREE standardised for body weight and FFM were stable (Table). mREE was 16-26% above predicted BMR across the SCT journey but was highly individually variable. Marked loss of weight and FFM occurred, even to day 100.

	t1	t2	t3	t4	t5	p
mREE(kJ)	8253±282	8488±286	8092±319	7901±296	7458±293	0.0001
mREE/kg(kJ/kg)	110±3	113±3	108±4	110±3	109±3	0.58
mREE/kgFFM(kJ/kg)	150±6	-	-	148±5	148±5	0.46
mREE%predBMR	123±3	126±3	120±4	120±3	116±3	0.10
Weight(kg)	79±3	80±3	80±3	76±3	73±3	0.0001
FFM(kg)	55±2	-	-	54±2	52±2	0.0002

Data show mean±standard error

Conclusion: Allogeneic SCT is associated with elevated REE. Decreasing REE over time may be related to ongoing FFM loss. Sequential measurement enables greater understanding of the impacts of SCT on individuals' energy expenditure and body composition, to support personalised nutrition support and nutritional rehabilitation.
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LONG-STAY NEUROSURGICAL PATIENTS ARE AT AN INCREASED RISK OF NUTRITIONAL INADEQUACY THROUGHOUT HOSPITALISATION

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Background: Existing literature has explored nutritional barriers faced by acute traumatic brain injury patients. As neurosurgery could be considered a form of controlled trauma to the brain, it is speculated that hospitalised neurosurgical patients face similar nutritional barriers, however this is not well established in the literature. This study aimed to explore the nutritional management and outcomes of acute hospitalised patients undergoing neurosurgical intervention.
Methods: Hospitalised patients who underwent neurosurgical intervention at a large metropolitan tertiary-referral teaching hospital in Sydney were eligible. Retrospective data was collected periodically across both ward and intensive care unit (ICU) admissions. Data included Subjective Global Assessment (SGA), weight, form of nutrition provision, dietitian intervention and presence of nutrition impact symptoms or events. Data were reported as descriptive statistics (median and range).
Results: Data was collected for 30 patients over 580 study days. Median length of stay in ICU was 3 days (range 1-36), hospital 11 days (2-62). Thirty percent (n=9) of patients were assessed by a dietitian. Fifty-three percent of all patients (n=16) experienced nutrition impact symptoms or events (nausea, drowsiness, dysphagia, confusion, inadvertent nasogastric tube displacement, poor appetite and fasting), with occurrences more common during ICU admission. Of these patients, 56% (n=9) were not referred to or assessed by a dietitian and received oral diet alone. All patients whose SGA score declined were long-stay patients (hospitalised for >30 days).
Conclusion: Acute neurosurgical patients experience nutrition impact symptoms or events throughout hospitalisation secondary to both patient-related and iatrogenic factors. As a result, neurosurgical patients may be at risk of nutrition inadequacy. A larger sample size of data will be collected to assist with determining generalisability of these results and to inform local models of care for this patient cohort.
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PATIENT EXPERIENCE OF THE HOME ENTERAL NUTRITION SERVICE AT ROYAL MELBOURNE HOSPITAL

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Background: Home Enteral Nutrition (HEN) is the provision of enteral nutrition via any appropriate access device, outside the hospital. This study aimed to evaluate the patient reported experience of patients on the Royal Melbourne Hospital (RMH) HEN service.
Methods: This single-centre, prospective audit assessed patient experience across a number of domains using a 29-question survey. Eligible patients had a feeding tube and were on the RMH HEN programme from August-September 2023. Data was collected via Redcap and included demographics, feeding tube type, satisfaction with feeding tube and equipment, mode of dietetic treatment and overall satisfaction.
Results: Ninety patients were eligible, of which 58 (64%) responded with an average age range of 60-69 years and 64% being female. Gastrostomy tubes were the most common (72%), followed by post pyloric tubes (21%), nasogastric tubes (2%) and 5% of respondents unsure of their tube type. Fifty-seven per cent had attended the Emergency Department (ED) for a tube related issue and 30% were not confident with how to manage tube dislodgements. Sixty-two per cent felt their General Practitioner was not equipped to manage feeding tube related issues. Eighty-four per cent of patients were satisfied or extremely satisfied with the mode and frequency of dietetic reviews and ninety per cent of patients felt their nutrition needs were well supported by their dietitian. Eighty-eight percent reported being satisfied or extremely satisfied with the HEN service overall.
Conclusion: Patient reported satisfaction with HEN services was high. Understanding the reasons for ED presentation is a priority to better inform service delivery models, including management of tube related issues and liaison with community services.
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