Abstract PMO-035 Table 1

Reference weight (kg)	Chair scales		Standing scales		Hoist scales	
	Range of weight (kg) and SD	Number within (UKWF) standards (%)	Range of weight (kg) and SD	Number within (UKWF) Standards	Range of weight (kg) and SD	Number within (UKWF) standards (%)
31.8	31.3–31.6 0.13 (SD)	0/17 (0%)	15.75–31.6 5.27 (SD)	0/17 (0%)	28.7–32.2 2.38 (SD)	1/9 (11%)
54.6					51.8–60 1.93 (SD)	1/9 (14%)
60.8	60.2–61.6 0.25 (SD)	14/17 (82%)	30.5–61.5 10.12 (SD)	6/9 (67%)		
106.7	105.6–106.7 0.26 (SD)	9/17 (53%)	53.5–106.7 17.67 (SD)	4/9 (44%)	103.6–107.4 2.16 (SD)	1/7 (14%)

results were obtained with the average weight subject (60.8 kg) with the chair and standing scales weighing within UK Weighing Federation error allowance by 82% and 67%, respectively. Accuracy decreased as the weight increased as can be seen in the Abstract PMO-035 table 1. Results for subject A (31.8 kg) did not meet the UK Weighing Federation standards. However, at least 78% of the results from the chair and standing scales weighed within 500 g of all the subjects' reference weights. The largest error on the hoist scales for Subject B (54.6 kg) was +5.4 kg increasing body mass index (BMI) by 2.0 kg/m^2 (height-1.64 m). A patient of similar height with a BMI of 18 kg/m^2 would calculate as a BMI of 20 kg/m^2. The MUST score would be 0 instead of 2, which triggers a referral for dietetic assessment according to Trust policy.

Conclusion This scales audit identified that both chair and standing scales were the most accurate over the range measure 60 kg and 105 kg. The hoist scales were the most inaccurate. The accuracy of all the scales decreased with the heaviest subject. With increasing levels of obesity this audit highlighted the need to calibrate scales more often and to re-audit with a wider weight range of up to 200 kg.

Competing interests None declared.

PMO-036 MALNUTRITION IN HOSPITALISED PATIENTS: DO WE ADDRESS THE PROBLEM?

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M Shah,* M Faimali. *Elderly Care, Lincoln County Hospital, Lincoln, UK*

Introduction Disease burden and hospital treatments are just some of the factors that contribute to the malnutrition found in hospitalised patients. Its prevalence has been documented over the years, with many studies linking its presence to a number of poorer outcomes including increased hospital stay, morbidity and mortality. The purpose of this audit was to examine whether the malnutrition universal screening tool (MUST) was used correctly and protocols followed for addressing malnutrition.

Methods We analysed the notes for all inpatients on the three care of the elderly wards at Lincoln County hospital during a 2-week period in June 2010 (n=90). Each patient's notes were evaluated to assess whether the MUST was used and if so appropriately. The audit recorded the frequency of MUST score recording and referral to dietetic/medical personnel when appropriate.

Results There were 90 patients included in this audit, 27 males and 63 females. The mean age was 79.5 years (50–99). 43 patients did not have a MUST score recorded within 24 h of admission and 32 did not have a weekly MUST score. Six patients required referral to dietetic/medical personnel with only two being referred. The protocol was followed correctly in 55 of the 90 patients.

Conclusion Malnutrition is a common problem within hospitalised patients. Proper nutritional care starts with the identification of at risk individuals through tools such as the MUST. In our experience the MUST tool is not used enough, delaying diagnosis with potentially worse outcomes.

Abstract PMO-036 Table 1

Must not recorded within 24 h (90)	Must not recorded weekly (90)	Referral indicated (90)	Referral not made (6)	Must protocol followed (90)
43	32	6	4	55

Competing interests None declared.

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PMO-037 ADULT NUTRITIONAL STATUS ASSESSMENT IN A HOSPITAL: CROSS SECTIONAL STUDY IN A UK HOSPITAL

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[1]S Dingwal,* [1]S Shah, [2]A Patel, [3]J Arnold-Jellis, [3]H Chin, [4]S Lunt, [1]S R Kadri. *[1]Department of Gastroenterology, Luton and Dunstable Hospital, Luton, UK; [2]Department of Clinical Quality, Luton and Dunstable Hospital, Luton, UK; [3]Department of Clinical Nutrition, Luton and Dunstable Hospital, Luton, UK; [4]Department of Dietitian, Luton and Dunstable Hospital, Luton, UK*

Introduction Malnutrition in hospital can result in significant health and economic consequences. It can prolong hospital stay and can increase the risk of complications.

Objectives This cross sectional study was undertaken to assess nutrition status on acute in-patients using the Malnutrition Universal Screening Tool "MUST", and compliance of completion of nutritional and hydration documentation such as nutrition care plans, food and fluid charts.

Methods Ten patients were randomly selected from ten wards across the hospital. Wards included four Acute Medical, three Care of the Elderly and three surgical wards. All one hundred patients' health records were reviewed to identify completion of the "MUST" assessment document; nutrition care plans, and food charts. Fluid chart were also reviewed to identify compliance in completion.

Results "MUST"—Of all the patients who had a "MUST" assessment undertaken 47% (*n* 26/55) were found to be low risk and 52% (*n* 29/55) had a medium or high risk score. Two of the 10 wards had more than 50% completion. No wards had 100% completion of "MUST" assessments. Forty five percent did not have a "MUST" score. Nutrition Care Plan documentation—Eight out of ten of the wards had a nutrition care plan for all or some of their patients. 60% were completed daily. Food chart—In nine out of the 10 wards all or some patients received a food chart. 66% were partially or fully completed. Fluid charts—In nine out of ten wards all or some patients had a fluid chart and 78% were partially or fully completed. Twenty two percent did not receive a fluid chart.

Conclusion The audit found suboptimal rates of completion of "MUST" assessment and nutrition care plan documentation. Over

50% of those assessed were found to be medium and high risk of malnutrition but it is unclear if they were the patients receiving the correct documentation. Repeat audits could identify this more clearly. We aim to put into place several improvements at ward level to increase compliance. These include; "MUST" calculators, a re-launch of "MUST" screening tools and supporting literature, ward based training. Senior management and ward sisters have been auditing own wards to ensure improvement in compliance with the introduction of ward directed monthly audits. These key clinical indicators of nutrition and hydration have also been based on key recommendations for CQC, DoH and NICE Guidelines.

Competing interests None declared.

PMO-038 A RE-AUDIT TO EVALUATE THE USE OF THE SPINAL NUTRITION SCREENING TOOL IN THE NATIONAL SPINAL INJURIES CENTRE (NSIC) AT STOKE MANDEVILLE HOSPITAL

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[1,2]S S H Wong,* [1]L Spillman, [3]J Doraikannu, [3]A Graham, [3]D Green, [2]G Grimble, [2]A Forbes. *[1]Nutrition and Dietetics, NATIONAL SPINAL INJURIES CENTRE, Aylesbury; [2]Centre for Gastroenterology and Clinical Nutrition, University College London, London; [3]National Spinal Injuries Centre, Stoke Mandeville Hospital, Aylesbury, UK*

Introduction Malnutrition is common in patients with spinal cord injuries (SCI).[1] National guidelines[2] [3] have set recommended standards for nutrition screening in patients with SCI. An unpublished audit to assess the use of the Spinal Nutrition Screening Tool (SNST) found that in 2009 the use was low.

Methods The present audit aimed to reassess the use of SNST and whether there had been any improvement since 2009. Ninety-three adults (mean age: 51.4 years, SD: 17.3, 17.2% female) with SCI (53.7% tetraplegia; 51.6% complete SCI) were audited in December 2011, on five in-patient wards. Data from individual patient notes were collected by two trained professionals (dietitian and nurse) using a standardised questionnaire.

Results Seventy-one (76.3%) sets of notes had a SNST form. Sixty-nine (74.2%) patients had their weight measured on admission, 49 (52.6%) had their height recorded, and 59 (63.4%) had their SNST fully completed. At the time of audit, 47.9% of patients were found to be at risk of undernutrition, 11.5% had a body mass index $<20\ kg/m^2$, and 19.4% were found to have eaten less than half of their last meal. The current audit showed that the use of the SNST has improved significantly: 2009 vs 2011: ward A: 0% vs 73.3%, $p<0.01$; ward p: 0% vs 33.3%, $p=0.01$; ward G: 23.5% vs 77.3%, $p<0.01$; Ward D: 22% vs 52%, $p=0.03$; ward J: 47.6% vs 81.3%, $p=0.01$;] and in the NSIC overall: 24% vs 63.4%, [$p<0.001$].

Conclusion The uptake of nutrition screening appears to have improved in the NSIC but with much still to be achieved. A nutrition steering group has been set up to monitor and evaluate the implementation of nutrition policy on a continuing basis.

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PMO-039 IS NUTRITIONAL RISK ASSOCIATED WITH ADVERSE CLINICAL OUTCOMES SUCH AS LENGTH OF STAY AND MORTALITY IN SPINAL CORD INJURED PATIENTS ADMITTED TO A SPINAL CENTRE?

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[1,2]S S H Wong,* [3]F Derry, [3]A Jamous, [4]S Harini, [2]G Grimble, [2]A Forbes. *[1]Department of Nutrition and Dietetics, National Spinal Injuries Centre, Aylesbury, UK; [2]Centre for Gastroenterology and Clinical Nutrition, University College London, London, UK; [3]National Spinal Injuries Centre, Stoke Mandeville Hospital, Aylesbury, UK; [4]School of Community and Health Science, City Univeristy, London, UK*

Introduction Malnutrition is common in patients with spinal cord injuries (SCI),[1] but its impact on clinical outcome may be underestimated. A disease specific nutrition screening tool (NST): the Spinal Nutrition Screening Tool (SNST) has been developed for use in patients with SCI but its predictive validity requires further investigation.[2]

Methods A multicentre (n=4), prospective, cross sectional and longitudinal study was therefore performed to evaluate whether undernutrition risk, measured using a simple validated nutrition screening tool (NST): the Spinal Nutrition Screening Tool (SNST), is associated with clinical outcomes such as the duration of in-patient stay (LOS) and 12 month mortality. Multivariate regression analysis was used.

Results One-hundred and fifty SCI patients (aged 18–88, median: 16.9, 30.7% female) were studied in four UK SCI centres (SCIC) between July 2009 and March 2010. The median LOS was 101 days (SD: 94.1) and the 12 month mortality rate was 4.7%. 44.6% were at risk of undernutrition and these individuals had a significantly longer LOS [median LOS (SD): 129 (102.1) vs 85 days (84.6); $p=0.012$] and greater 12-month mortality [9.2% vs 1.4%; $p=0.036$]. Multivariate regression identified acute admission and serum albumin level are independent predictors for long hospital LOS.

Conclusion The present study suggests that nutrition risk identified by the SNST score is associated with adverse clinical outcomes. Serum albumin is an independent predictor for an adverse clinical outcome. Nutritional screening on admission and periodic repeating may be helpful in improving clinical outcomes if it is used to influence practice.

Abstract PMO-039 Table 1 Multivariate regression of variables

Variables	Un-standardised coefficient (B)	SE	p Value
Constant	197.41	72.42	0.007
Risk of malnutrition (SNST)	1.15	20.66	0.956
Risk of malnutrition (MUST)	14.27	20.11	0.478
Type of admission	81.23	15.39	0.001
Use of ventilatory support	37.01	26.56	0.163
Previous ITU stay	25.35	17.41	0.145
Serum albumin	−3.62	1.461	0.013
Level of SCI	−18.31	14.91	0.219
Serum total protein	0.08	1.287	0.951

SNST, Spinal Nutrition Screening Tool; MUST, Malnutrition Universal Screening Tool; ITU, Intensive therapy unit; SCI, spinal cord injury; Adjusted multiple correlation coeffient R^2: 0.352.

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