reduction in PN days as result of reduced waiting time for procedures to facilitate EN.

Conclusion Implementation of NST resulted in:

12 patients (40%) were successfully prevented from inappropriately starting PN and the median duration of PN reduced by 1 day - A total reduction of **132 less PN days.**

The number of peripheral PN days was reduced by 189.5 days.

A reduction in the number of patients on PN awaiting a procedure to facilitate EN.

A conservative estimate of £**20 671.20** was saved as a result.

Abstract OC-073 Table 1

	2009–2010 (PN team only)	2010–2011 NST (PN&EN team combined)
No of patients referred for PN	105	73
Case notes obtained	75	72
Referrals deemed inappropriate by PN	15 (20%)	29 (40%)
No of inappropriate patients successfully prevented from starting PN (%)	0	12 (40%)
Ratio central: peripheral PN days (%)	69:31	96:4
Peripheral PN days	212.5	23
Median PN days	6	5
Total No of PN days	681	539
No of patients on PN because they were awaiting NG/NJ tube insertion or endoscopic procedure	18 (24%)	2 (3%)

Competing interests None declared.

REFERENCES

1. **Austin**, Stroud. 2007.
2. *Nutrition Support In Adults*. NICE, 2006.
3. *A Mixed Bag*. NCEPOD, 2010.

OC-074 NUTRITIONAL ASSESSMENT AND OUTCOME IN PATIENTS UNDERGOING EMERGENCY ABDOMINAL SURGERY

doi:10.1136/gutjnl-2012-302514a.74

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Introduction Malnourished Surgical patients are at a significantly greater risk of post-operative complications and death than well-nourished patients. The "Malnutrition Universal Screening Tool" (MUST) is a validated tool for identifying at-risk patients. This paper studies the application of MUST in patients undergoing emergency abdominal surgery and the accuracy of this tool in predicting need for artificial nutritional support and clinical outcome.

Methods A prospective cohort study of patients undergoing emergency abdominal surgery at a university surgical unit over a 2-month period was undertaken. MUST data were collected prospectively and *admission* and *highest* (maximum score during admission) MUST scores calculated independently by two researchers. Clinical outcome data were collected.

Results 55 patients were included, median age 66. Median *admission* and *highest* MUST scores were 0. Eighteen patients had a highest MUST of ≥2. Post-operative complications included ileus (n=9), severe sepsis (n=6) and death (n=10), and were associated with increased *highest* MUST scores (2 vs 0, p=0.005). All patients with MUST ≥4 died (n=4). On multivariate analysis, both *admission* and *highest* MUST scores predicted need for artificial nutritional support (p=0.011 and p=0.005). A *highest* MUST score ≥4 independently predicted both artificial nutritional support requirement (p<0.001) and death (p<0.001).

Conclusion *Admission* MUST scores predict requirement for artificial nutritional support. MUST scores repeated during admission offer utility in predicting both requirement for artificial nutritional support and survival. Clinicians have a responsibility to ensure accurate nutritional assessments are undertaken throughout hospital admission in order to identify those at risk and institute appropriate treatment.

Competing interests None declared.

OC-075 ASSESSMENT OF NUTRITIONAL STATUS IN PATIENTS WITH CIRRHOSIS: MUST IS NOT A MUST

doi:10.1136/gutjnl-2012-302514a.75

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Introduction The incidence of malnutrition in patients with cirrhosis is high. However, it often goes undetected as many screening tools are based on measurement of body mass index (BMI), which is a poor nutritional marker in this population as patients tend to be centrally obese yet muscularly depleted. The gold standard for the assessment of malnutrition in this population is the Royal Free Hospital Global Assessment (RFH-GA). The Malnutrition Universal Screening Tool (MUST), which is based on BMI, is still used in some UK Liver transplant Units, although it may not be valid in this setting. Hence the aim of this study is to validate the MUST tool against the gold standard RFH-GA for use in patients with cirrhosis.

Methods Multicentre validation was undertaken in a cohort of 133 patients, (98 men: 35 women; age 56 [23–73] yr) with cirrhosis across five UK liver transplant units. Nutritional status was screened using the MUST tool and then categorisation of nutritional status was determined by using the RFH-GA. The analysis of descriptive data, cross-tabulation, performance variables, 95% CIs and κ values were calculated using standard methods. κ Values were interpreted according to Altman, 1999.

Abstract OC-075 Table 1 The performance of the MUST utilizing alternative weight adjustments in patients with fluid retention

	Mean (95% CI)					
Modified analysis	Sensitivity	Specificity	PPV	NPV	κ	Strength of agreement
Must	63 (46 to 78)	87 (84 to 90)	69 (51 to 83)	86 (77 to 92)	0.27 (015 to 0.41)	Fair
Mendenhall	71 (54 to 84)	87 (79 to 93)	69 (52 to 82)	88 (80 to 94)	0.30 (0.17 to 0.43)	Fair
Morgan	79 (62 to 90)	87 (79 to 93)	71 (55 to 84)	91 (83 to 96)	0.44 (0.32 to 0.57)	Moderate

Results Eight-four (63%) of the 133 were categorised, using the RFH-GA, as being moderately or severely malnourished. In contrast the MUST tool identified only 45 (34%) patients as being at nutritional risk. Thus the sensitivity and specificity of MUST for determining nutritional risk were 34% (95% CI 20 to 51) and 94% (95% CI 86 to 97); respectively; the κ value was 0.19 demonstrating a poor level of agreement. The sensitivity and specificity of MUST improved when the patients with fluid retention were excluded from the analysis, 100% (95% CI 46 to 100) and 91% (74–98); respectively. The performance of the MUST also improved as the accurate dry body weight was better calculated but still did not reach 100% sensitivity indicating body weight alone is not a good marker of nutritional status in this patient population.

The performance of the MUST utilising alternative weight adjustments in patients with fluid retention

Conclusion The performance characteristics of the MUST tool in this setting are poor. This tool, can not be recommended for screening patients with chronic liver disease for nutritional risk.

Competing interests None declared.

OC-076 ASSESSING KNOWLEDGE OF RECOGNITION AND TREATMENT OF MALNUTRITION AMONG HEALTHCARE PROFESSIONALS

doi:10.1136/gutjnl-2012-302514a.76

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Introduction Malnutrition is common in hospitals, affecting up to 40% of patients.[1] Malnourished patients are vulnerable to ill health and are known to be at increased risk of complications during inpatient stays.[2] In 1999 Nightingale *et al* studied healthcare professionals' knowledge of nutrition and despite recognition of its importance, understanding was found to be poor.[3] We aim to assess whether there has been any improvement in healthcare professionals' knowledge of nutrition.

Methods We approached healthcare staff from a tertiary referral centre and two district general hospitals to complete questionnaires to evaluate their understanding of assessment and treatment of under nutrition. The questionnaire contained 18 multiple choice questions in which staff were asked to select the correct answer from five possibilities. All questions were constructed from the 2006 NICE guidelines: Nutrition Support in Adults.[2]

Results We obtained 114 responses from 67 doctors, 10 nurses, 12 pharmacists, 10 dietitians and 15 final year medical students. Dietitians' average score was significantly higher than all other groups (81.7%, p<0.001). Medical students scored lowest (25.4%). Pharmacists averaged 42.6%, doctors 35.8% and nurses 25.4%. There was no statistically significant difference between medical and surgical specialties (36.6% vs 33.6%, p=0.4). Consultants and registrars both averaged 43.8%, SHOs 32.4% and F1s 28.8%. Only 8.9% of doctors felt that they had received adequate nutritional training. 90.0% of nurses and 30.0% of doctors surveyed did not know how to calculate body mass index (BMI). Only 34.8% of doctors could correctly identify the BMI below which one would be considered underweight. 50.0% of doctors did not know an average person's daily fluid requirements. Knowledge of parenteral feeding and the nutritional needs of septic patients was also particularly poor among all health professionals except dietitians.

Conclusion These results suggest that basic understanding of nutrition remains poor. There needs to be greater emphasis on both undergraduate and postgraduate training in nutrition to ensure that recognition and treatment of malnutrition can be improved.

Competing interests None declared.

REFERENCES

1. **Barker L**, *et al.* Hospital malnutrition: prevalence, identification and impact on patients and the healthcare system. *Int J Environ Res Public Health* 2011;**8**:514–27.
2. **National Collaborating Centre for Acute Care**. *Nutritional Support in Adults, Oral Nutritional Support, Enteral Tube Feeding and Parenteral Nutrition*. London: National Collaborating Centre for Acute Care, 2006.
3. **Nightingale J**, Reeves J. Knowledge about the assessment and management of undernutrition: a pilot questionnaire in a UK teaching hospital. *Clin Nutr* 1999;**18**:23–7.

OC-077 JEJUNAL TUBE FEEDING EXPERIENCE IN PAEDIATRIC NUTRITION SUPPORT

doi:10.1136/gutjnl-2012-302514a.77

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Introduction There is an emerging group of children in whom poor and worsening upper GI dysmotility limits feed toleration and impacts growth; we wished to evaluate the role of jejunal tube feeding (JTF) in this group.

Methods A retrospective cohort study (database/clinical note review) in a tertiary paediatric centre to evaluate use of PEG-J, transgastric gastrojejunostomy (GJ) tubes and surgical roux-en Y jejunostomy (ReYJ), and the impact on growth of JTF in children with worsening GI dysmotility. All children (<18 years) receiving home enteral tube feeding (HETF) during the period 01 January 2002–31 December 2011. Weight at time of commencing JTF and at 6 or 12 months post-start was collected and expressed as SD or Z-score. Change in weight Z-score was calculated using paired t-test.

Results A total of 866 children received HETF during the study period, of whom 41(5%) had JTF at home. Median (range) decimal age at start of JTF was 2.7(0.1–16.2) years. 36 of 41 (88%) had an underlying neurodisability; 33 of 41 (80%) were gastrostomy fed prior to commencing JTF. Of the 41 JTF children, 19 (46%) were fed via a GJ tube, 5 (12%) via PEG-J and 17 (42%) had a ReYJ. The majority of JTF related complications occurred with GJ tubes; although usually minor, one death occurred following small bowel intussusception around a GJ tube. Minor JTF complications included burst balloons, holes in the Y-port or tube and fungal infection and resolution required tube changes. Tube migration was a problem with both GJ and PEG-J tubes; ReYJ were associated with the fewest minor complications of stomal infection and leakage. By study end, 21 (51%) continue on JTF, 9 (22%) died (all but 1 due to their underlying condition), 1 (2%) moved out of area, 2 (5%) transitioned to adult services and 8 (20%) returned to gastric feeding. 25 of 41 children had JTF for >6 months and had longitudinal growth data collected; median (range) weight Z-score at the start of JTF was −1.3 (−5.2–2.1) and rose to −1.0 (−3.4–2.3) by 6–12 months, with a significant improvement in mean (95% CI) change in weight Z-score of 0.7 (0.1 to 1.3) (p=0.02).

Conclusion There are time consuming practical challenges associated with JTF, some of which are device dependent, and ReY JTF appears best for long-term usage. JTF is an effective intervention to improve growth in children with severe and worsening upper GI dysmotility.

Competing interests None declared.