

Methods All patients in whom PN was initiated in 2010 at Worcester Royal Hospital were assessed retrospectively by case note review by a single author (AMP). A list of all patients who had received PN was kept by the Pharmacy department, ensuring a 100% pick up rate. Appropriate PN indications were defined according to the NICE guidelines. Patients with a functional and usable GI tract (capable to absorb adequate nutrients via appropriate enteral tube access), patients in whom dependence on PN was anticipated to be <5 days and patients whose prognosis did not warrant aggressive nutritional support were defined as receiving inappropriate PN. CRS was judged to have occurred when the patient had a temperature of $\geq 38.0^{\circ}\text{C}$ along with either a subsequent positive line tip culture or positive blood cultures in the absence of any other potential source of sepsis.

Results 61.4% of the patients were male. The median age at commencement of PN was 67.1 (IQR 59.9–80.3). There were 101 episodes of PN, with a median duration of PN of 7 days (IQR 5–14). A total of 1214 days of PN were administered. Full information was available for 92 of these episodes, a total of 1093 days. The majority of PN was given via non-tunnelled central venous catheters (58.3%) with a further 23.7% by Hickmann line, and 13.4% peripherally. Sixty-eight of the episodes were assessed to have been initiated for appropriate indications: 50% of these due to ileus, 19.1% due to obstruction and 14.7% due to fistulae. Twenty-four episodes, totalling 182 days of PN, were judged to have been inappropriate, predominantly due to inadequate consideration being given to enteral tube access. CRS complicated 16 of the episodes (17.4%) and there were 18 CRS events, equating to 16.5 events/1000 catheter days. The majority of these (16/18) were due to coagulase negative *S aureus*.

Conclusion Inappropriate PN and CRS rates are at the level that would be expected in a hospital where there is no NST. Increased vetting of PN referrals and more effective training in line care that would come with a formal NST could have cost benefits for the trust.

Competing interests None declared.

PMO-060 RESTORING INTESTINAL CONTINUITY AFTER A SMALL BOWEL INFARCTION REDUCES THE VOLUME AND FREQUENCY OF PARENTERAL NUTRITION

doi:10.1136/gutjnl-2012-302514b.60

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Introduction A small bowel resection for ischaemia is one of the most common reasons for an admission to an intestinal failure unit (IFU) and for a patient needing home parenteral nutrition (HPN). The aim was to determine the changes in parenteral fluid, sodium and energy given to patients who have had a massive small bowel resection for ischaemia and in whom intestinal continuity is subsequently re-established by anastomosing the duodenum/jejunum to the remaining colon.

Methods Patients were identified using the IFU database. Case notes were retrospectively reviewed for the fluid, sodium and energy requirements before and after intestinal continuity was restored. Median values of the weekly requirements were calculated for 2 years after the continuity surgery had been performed.

Results 12 (5M) patients, mean age 51 years (range 30–77). 2 patients died at 12 months (one sepsis, one brainstem stroke) and one patient had not reached 24 months follow-up. The resection was for arterial infarction in eight patients, venous infarction in one patient, volvulus in one patient, incarcerated hernia in one patient and iatrogenic following surgery in one patient. Six patients had a small bowel length of <50 cm, nine patients had colon beyond hepatic flexure (five with ileocaecal valve) and three patients anastomosis to transverse colon. Two patients stopped PN completely at 1 month. These two

patients had final small bowel lengths of 90 cm and 260 cm. There was a significant reduction in volume of feed and sodium given t1, 3–6, 12 and 24 months ($p < 0.05$, Wilcoxon matched pairs test).

Conclusion Restoration of intestinal continuity to bring the colon into circuit results in less parenteral fluid (at least a litre/day) and sodium being needed but not necessarily the amount of energy. The number of nights where PN is required may be reduced in the 2 years after continuity has been restored.

Abstract PMO-060 Table 1 Median values of HPN requirements

	Pre continuity	Post continuity 1 month	Post continuity 3–6 months	Post continuity 12 months	Post continuity 24 months
n	12	12	12	10	9
Volume of fluid (l/wk)	19.5	12.5	11.0	9.5	11.0
Sodium (mmol/d)	205	150	154	127	133
Energy requirements (kcal/wk)	8400	7578	7798	8190	8400
Nights of infusion/wk	7	7	7	4.5	4

Competing interests None declared.

PMO-061 AN EVALUATION OF THE IMPACT OF A MULTIDISCIPLINARY NUTRITION SUPPORT TEAM ON THE PROVISION OF PARENTERAL NUTRITION (PN) IN AN NHS FOUNDATION TRUST HOSPITAL

doi:10.1136/gutjnl-2012-302514b.61

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Introduction In June 2010 NCEPOD released its report: A Mixed Bag.¹ This instructed hospitals providing PN to encourage active input from a multidisciplinary NST. The process involved in providing PN to patients involves complex decision-making, and it is life-saving for some. However, when given inappropriately or without careful monitoring, there can be serious metabolic and physiological consequences. This audit examined the impact a NST has on the appropriate prescribing of PN.

Methods The study included patients who received PN at the Royal Surrey County Hospital over the period 1 June 2010 to 1 June 2011. Data were collected in line with the NCEPOD report, including when and by whom PN was started, indication for use and number of days fed.

Results During the study period, 171 patients were referred for PN. In 61% of cases the opinion of the NST was requested prior to the commencement of PN (Group A). In the remaining 39% of cases (Group B), PN was initiated without NST involvement, with the NST review occurring subsequently. On review, the NST considered PN to be an inappropriate means of nutritional support in 25.7% of the patients in Group A, and it was therefore not provided. Of these patients, 81% were successfully established onto either oral or enteral feeding, and a further 8% died shortly after referral. The remaining 11% later received PN due to loss of enteral access or further post-operative complications. There was no survival disadvantage in this group. Of the patients in Group B, 33% were commenced on PN over a weekend. Of these 38% received PN for <5 days and 19% for <3 days. Following assessment, the NST believed that 14% of the patients in group B were started on PN when an alternative means of providing nutritional support would have been more suitable at the time of initiation.

Conclusion Prescribing of PN continues to occur both out of hours and without consultation with a dedicated NST. Our data demonstrates that timely involvement of the NST in feeding decisions can avert inappropriate initiation of PN in a significant proportion of cases, which has clinical and cost-saving implications. We therefore strongly recommend that clinicians should utilise the expertise of a multidisciplinary NST at the earliest opportunity in complex feeding scenarios.

Competing interests None declared.

REFERENCE

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PMO-062 NUTRITION SUPPORT INFRASTRUCTURE IN THE EAST OF ENGLAND—ANGLIA NUTRITION NETWORK (ANNET)

doi:10.1136/gutjnl-2012-302514b.62

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Introduction ANNet—the Anglia Nutrition Network—was established in 2011 to provide a forum for inter-professional communication, sharing good practice and innovations across the Anglian region in order to improve the quality and experience of all aspects of nutritional care. 17 secondary acute hospital trusts participate in the network which looks after a population of approximately six million. This survey reports on the nutrition team infrastructure within the network.

Methods ANNet was established with a formal constitution voted at the inaugural Annual General Meeting in September 2011. Among the first activities of ANNet was a description of the nutrition infrastructure in the region. This first “5 min survey” was disseminated among lead clinicians participating in the network in order to develop a snapshot of in hospital parenteral nutrition practice.

Results The response rate was 100% of the 17 Trusts participating in the network. 15/17 Trusts have a nutrition support team but of these three had no nutrition support nurse specialists and 4 had no allocated consultant time. 13 teams were led by a gastroenterologist, one by a nurse and one by a chemical pathologist. 7/15 teams see patients on parenteral nutrition twice or less each week, and 6/15 carry out daily ward rounds. 10/17 Trusts provide out of hours PH, but only five of these with vitamins and trace elements and 5/17 are able to compound from scratch. A snapshot revealed 88 patients on PN at the time of the survey (14/million), of which 72% were type I intestinal failure, 18% type II and 10% type III. The median number of patients receiving PN was four, with only three Trusts providing PN for more than five patients at the time of the survey—two with seven (one of which did not have a nutrition support team) and one Trust with 26, providing 30% of the region’s PN.

Conclusion Compared to national figures, a higher proportion of Trusts in the region have a nutrition support team, although in many instances this is incompletely staffed. There are a relatively small number of patients receiving PN at any one time in any Trust, but a surprisingly high proportion of these have type II intestinal failure which are currently scattered around the region. ANNet is a useful resource for gathering information with a 100% response from participating Trusts in the network, covering approximately 10% of the UK population. A follow-up survey will focus on intestinal failure surgery.

Competing interests None declared.

PMO-063 OUTCOMES OF PATIENTS ON HOME PARENTERAL NUTRITION FROM A REGIONAL INTESTINAL FAILURE UNIT

doi:10.1136/gutjnl-2012-302514b.63

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Introduction HIFNET proposals to create regionalised services for intestinal failure (IF) in England led us in 2007 to start active development of our small pre-existing regional IF activities and consequent expansion of our IF network. We report our outcomes compared to other published data.

Methods Data were retrospectively collected from electronic and paper records for adult patients who received HPN between January 2001 and October 2011.

Results Data were available for 79/81 patients (45 female) who received HPN for a period of 160 patient-years. 45 (57%) patients were regional referrals, 21 (27%) patients had type 2 intestinal failure and 58 (73%) type 3. The total number of patient-days in 2011 was 11 787 (type 2 2748, type 3 9039) compared to 4524 in 2007 (type 2 60, type 3 4464), despite only 10 months of 2011 data available at time of data collection. The period prevalence of patients on HPN in 2011 was 42 compared to 11 in 2007, a 381% increase. The median duration patients were treated was 230 days in 21 type 2 patients and 712 days in 47 type 3 (excluding palliative HPN), with on-going treatment in 37 patients. The rate of catheter related sepsis was 1.16 per 1000 patient days, comparable to 0.86 per 1000 patient days reported by one national centre.¹ The line occlusion rate was 0.27 per 1000 patient days and no episodes of bacterial endocarditis, similar to data from another regional unit, 0.68 per 1000 days and 0.05 per 1000 days respectively.² There were eight deaths (excluding palliative HPN), of which three were liver complications of type 3 IF in patients who were either ineligible or declined transplantation.

Conclusion These data demonstrate a significant increase in HPN activity, particularly the last 5 years and the need for regional IF centres to cope with previous limited national capacity. Despite this increase in demand, quality outcome measures were comparable with those from other regional and nationally funded units.

Abstract PMO-063 Table 1 Aetiology of disease

Aetiology	Type 2 IF (%)	Type 3 IF (%)
Surgical complications	11 (52)	6 (10)
Mesenteric infarcts	7 (33)	6 (10)
Crohn’s disease	3 (14)	13 (22)
Malignancy		11 (19)
Dysmotility		8 (14)
Systemic sclerosis		3 (5)
Other		11 (19)

Competing interests None declared.

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