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Audit of adult inpatients receiving parenteral nutrition – 3-year trends since setting up a nutrition support team

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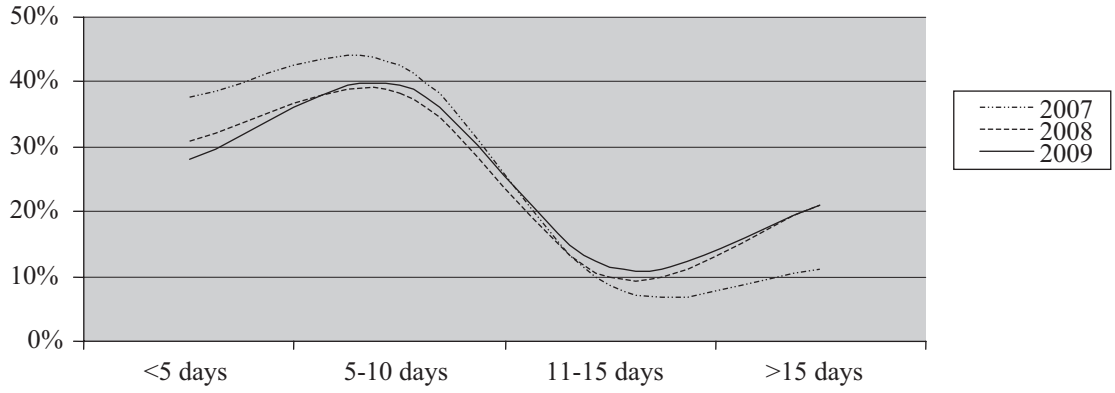
Parenteral nutrition is a well-recognised method of providing nutrition to patients with short- or long-term intestinal failure and is best managed by a co-ordinated team approach[1–3]. In Portsmouth, the nutrition support team (NST) has been operating for 6 years. Twice weekly ward rounds, daily reviews by members of the NST, regular teaching and support to nursing and medical staff, have made a positive contribution to the management of these patients. Eight standards in the local policy for the management of adult patients on parenteral nutrition are audited annually, based on good practice[2,3]. An electronic database has been designed and audit data collected by members of the team since 2007 – results are presented and trends over the last 3 financial years explored.

	Patients receiving PN (*n*)	Duration of PN episodes (d)	Median duration of PN episode (d)
2007–2008	82	1–62	6
2008–2009	81	1–111	6
2009–2010	71	2–40	7

The drop in patients receiving PN is 13.5%. The median duration compares with the 8 d from the National Confidential Enquiry into Patient Outcome and Death (NCEPOD)[1]. The percentage of patients and the duration of PN delivery are given below:



The number of different clinical specialties requesting PN has reduced over the last 3 years, especially those episodes of short duration (3 d or less), possibly reflecting a greater control on inappropriate usage. The proportion of short-duration PN from the NCEPOD results[1] recently published was 20%, compared to 18, 10 and 20% in Portsmouth, over each of the 3 years. The percentage of patients receiving PN for 3 d or less by specialty was:

	2007–2008	2008–2009	2009–2010
Colorectal surgery	34%	50%	50%
Upper GI surgery	26%	25%	29%
Gastroenterology	7%	0%	0%
Other	33%	25%	21%

The proportion of PN for patients from specialties other than GI surgery has decreased over the 3 years. The most common reason for PN was post-operative ileus which increased from 31% to 50% over the 3 years, the duration of which is difficult to predict. These trends may reflect a decrease in inappropriate PN[1]. The number of patients deemed at risk of re-feeding syndrome following local guidelines increased in the last year.

	At risk (*n*)	Not at risk (*n*)	Unknown (*n*)
2007–2008	54	34	12
2008–2009	52	34	14
2009–2010	63	30	7

A rise in the last year reflects the findings of NCEPOD[1] who deemed 60.3% were at risk compared to 49.8% as documented. The percentage of referrals, where adequate biochemistry was available for the nutritional assessment to be undertaken, was:

2007–2008	58%
2008–2009	85%
2009–2010	78%

Incomplete biochemistry on referral will potentially compromise the appropriateness of the initial prescription[1–3]. These data support the effectiveness of a multidisciplinary nutrition team in managing PN within a district general hospital.

1. Stewart JAD, Mason DG, Smith N *et al*. (2010) *A Mixed Bag: An Enquiry into the Care of Hospital Patients Receiving Parenteral Nutrition.* London: National Confidential Enquiry into Patient Outcome and Death.
2. National Institute for Health and Clinical Excellence (2006) *Nutrition Support in Adults: Oral Nutrition Support, Enteral Tube Feeding, and Parenteral Nutrition*. Clinical Guideline 32, London: National Institute for Health and Clinical Excellence.
3. ASPEN Board of Directors (2002) Guidelines for the use of parenteral and enteral nutrition in adult and pediatric patients. *JPEN J Parenter Enteral Nutr* **26**, Suppl 1, 1SA–138SA.