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## **Outpatient fluid and electrolyte management for patients with high output stomas and enterocutaneous fistulae. A nutrition nurse led service**

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It is well recognised that optimal fluid and electrolyte management in surgical patients is an ongoing challenge<sup>(1,2)</sup>. This is particularly true for patients with high output stomas and enterocutaneous fistulae. While they may be able to meet their protein and calorie requirements they often have significant fluid and electrolyte problems. Their care in our trust has historically been restricted to a long inpatient stay or discharge with traditional outpatient follow up arrangements. The nutrition support teams were involved with these patients during their inpatient stay. Following discharge many of these patients subsequently developed fluid and electrolyte problems as outpatients and a minority had to be re-admitted due to associated complications including acute renal failure. The nutrition support team had identified that additional monitoring and outpatient based care would be beneficial to this cohort and a nurse-led outpatient service was established. We report our initial experience with this service.

The patients included have been assessed as meeting their nutritional needs enterally, however, they require fluid and electrolyte monitoring and/or replacement. Patients attend a specific ward based clinic and day care facility for monitoring and i.v. hydration along with PICC line care and maintenance. Psychological support with multidisciplinary access including stoma care, nutrition nurse specialists, pharmacist, dietitian, medical staff and tissue viability is available. Parameters monitored include fluid balance, dietary intake, weight, serum biochemistry, urinary sodium and medication review. Individual cases are discussed weekly at a multidisciplinary nutritional support meeting and if there were any complications/problems they are reviewed and addressed. This meeting comprises of a nurse, pharmacist, dietitian, surgeon and clinical biochemist.

Duration of data collection – 1/9/09 to 1/6/10. Data were collected prospectively on a data base. Total number of patients seen was 28 (19 male). Their mean age was 60 (range 20–79). Twenty-four of them had high output stomas and 4 had fistulas. Underlying diagnosis was: Malignancy 7, IBD 13, obstruction 2, anastomatic leak 2, hernia repair 2, diverticulitis 1 and retro caecal abscess 1. Mean duration of clinic attendance was 99 d in a range of 26–274 d. In total 9 of these patients utilised the day care facility for i.v. therapy. Seven of these were managed with PICC lines. No infections or blockages were identified. One PICC line was replaced in a female patient whose duration was 272 d due to persistent withdrawal occlusion. The remaining 2 were managed with peripheral access. No patients were readmitted due to complications. Patients were either: optimised for surgery and then discharged, discharged from this service after correction of biochemical imbalance without surgery, had long term monitoring and correction without an inpatient stay or were discharged to an intestinal failure unit.

We believe this service provides a valuable resource which reduces complications associated with fluid and electrolyte imbalance in this patient group.

1. Walsh SR & Walsh CJ (2005) Intravenous fluid associated morbidity in postoperative patients. *Ann R Coll Surg Engl* **87**, 126–130.
2. Powell–Tuck J *et al.* (2010) *British consensus guidelines on intravenous fluid therapy for adult surgical patients GIFTASUP*. BAPEN Medical.