

## Total Parenteral Nutrition Wastage: A Retrospective Cohort Study in a Small District General Hospital

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**Abstract :** Background: Total parenteral nutrition (TPN) use within the NHS is crucial in the prevention of malnourishment. TPN prescriptions are tailored to an individual patient's needs. TPN bags come in fixed sizes, and minimizing wastage has financial and sustainability implications for the health service. The aim of the study is to assess current prescribing practices, look at the volume of TPN wastage and identify reasons for it. Methodology: A retrospective cohort study on TPN prescriptions over a period of 1 year (Jan-Dec 2022) was performed. All patients prescribed TPN that had been admitted under a general surgery consultant in a small district hospital were included. Data were extracted from hospital electronic records and dietician charts. Data were described, and reasons for TPN wastage were explored. Results: 49 patients were identified. The average length of TPN prescription was 8 days (median). This totaled 608 prescriptions. Of the bags prescribed, 258, 169, and 181 were 10g (2500ml), 14g (2000ml), and 18g (2000ml), respectively. The mean volume wasted from each type of bag was 634ml, 634ml, and 648ml, respectively. Reasons for TPN wastage identified were: no loss (25%), smaller bags not available (53.6%), step-down regime (8.1%), and other (12.2%). Conclusion: This study has identified that the current stocking and prescribing of TPN within a district general hospital leads to a significant wastage of 638.2ml (average). The commonest reason for wastage is the non-availability of a more appropriate sized bag.

**Keywords :** general surgery, TPN, sustainability, wastage

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