

An Audit of Enteral Feeding Pump Infusion Volume versus Enteral Target (PIVET)

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Introduction

Historically dietetic practice in St Vincent's University Hospital (SVUH) included using fluid balance charts and verbal reports from nursing staff to determine the adequacy of enteral feed received by patients. There are many reasons why these may not be accurate. Use of enteral pump infusion volume history may allow for more precise nutrition assessment.

The aim of our audit was to compare the volume of enteral feed prescribed by the dietitian versus the volume infused by the enteral feeding pump versus fluid balance records.

Methods

A prospective study was carried out over 3 months on patients who were enterally fed using a pump (n = 39).

Patients were excluded if they were:

- discharged from hospital,
- if their enteral feed was discontinued,
- or if the pump history was cleared in error during the 72 hour timeframe in which data was collected.

20 patients were included in the audit.

The pump history of each enteral feeding pump was reset by the dietitian at a designated time, which was recorded. The dietitian returned 72 hours later to view the volume infused by the feeding pump, as well as the volume recorded by nursing staff in the fluid balance within this timeframe. The amount of feed prescribed during this timeframe was calculated.

The results involved comparing the volume infused by the feeding pump versus the recorded fluid balance volume versus the volume of feed prescribed by the dietitian.

Results

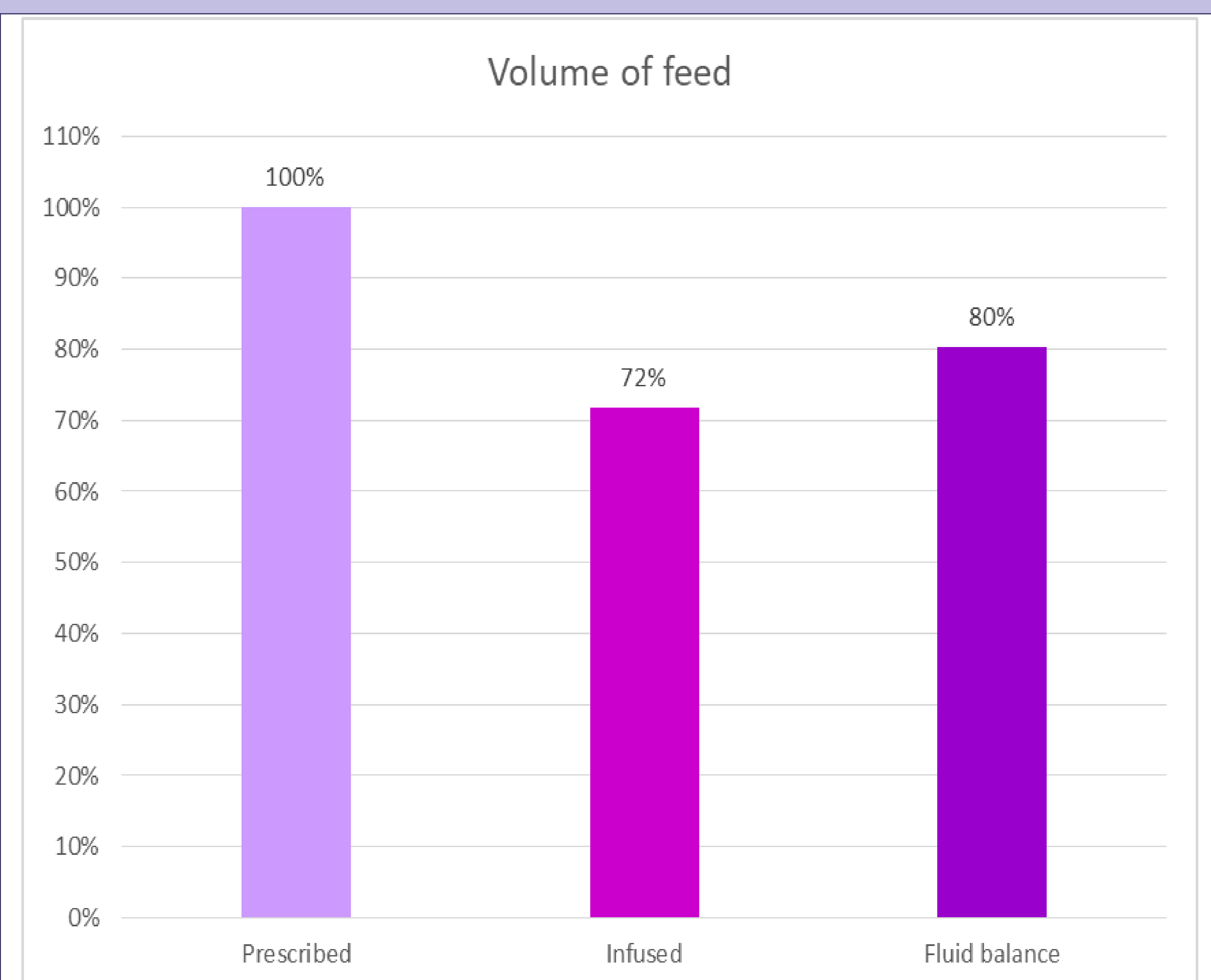


Figure 1

Results

The pump history for the 20 analysed patients suggested that on average 72% of prescribed enteral feed volume was infused, whilst the fluid balance records suggested that 80% of prescribed enteral feed volume was infused. A visual representation of this can be seen in Figure 1 above.

Conclusion

In clinical practice we aim to strive for nutritional adequacy of enteral feed equal to or greater than 80%. This audit demonstrates that this figure is not being reached, at 72%.

There is an 8% discrepancy in volume infused as per feeding pump history and the recorded fluid balance volume. This may seem insignificant, however, over a week this deficit can be equivalent to one full day's nutritional requirements.

Recommendations

- We recommend that all dietitians use pump history data as part of their routine assessment and review of patients. A practical demonstration on how to complete a pump history check was provided to the SVUH dietetic department to facilitate this.
- We recommend that all nurses undertake education on the importance of recording fluid balance charts accurately as part of their routine training on commencement of employment in the hospital.

Potential further projects could include looking at volume-based and catch up feeding, where appropriate.