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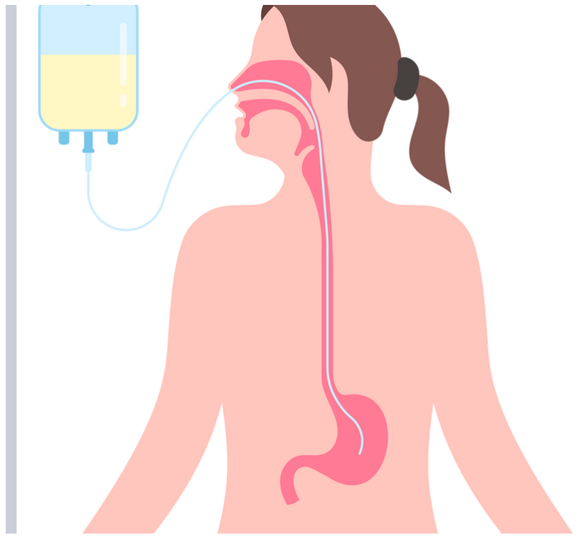
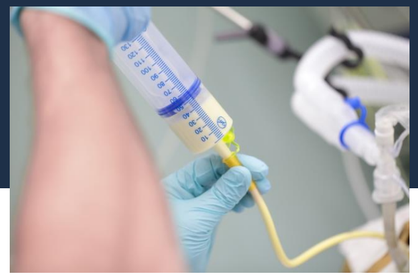
Guy's and St Thomas' NHS Foundation Trust

AN AUDIT OF ENTERAL NUTRITION IN A CARDIAC INTENSIVE CARE UNIT



PRESENTATION BY PRISCILLA BEKOE

INTRODUCTION &



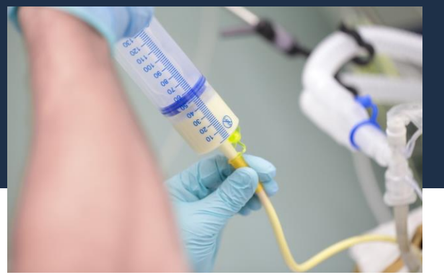
Critical illness in the body induces significant catabolism whereby nutrients are used at a much faster rate, and energy stores and muscle mass are depleted (Bufarah et al., 2017).

Nutrition support in critical illness is important because it prevents loss of lean body mass, and metabolic deterioration, reducing the length of hospital stay, and improving critical illness outcomes (Abrha et al., 2019).

Early initiation and sustained enteral nutrition(>80% target feed) in adult critically ill patients improves nutrition, recovery and cost of care (Dolmatova et. al., 2021).

- The prevalence of malnutrition in critical illness ranges from 38% and 78% (Hejazi et al., 2016; Shahbazi et al., 2021; Narayan et al., 2020; Lew et al., 2017).
- Malnutrition in critical care is associated with a 33% increased risk of 28-day mortality (Lew et al., 2017).

AIM AND OBJECTIVE

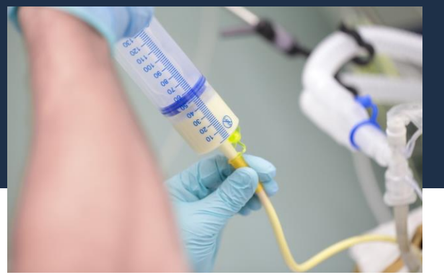


- **AIM**

The overarching aim of the audit seeks to address the question: Are we meeting standards of best practice for optimising nutrition in our critically ill cardiac patients?

- **OBJECTIVES**

To evaluate enteral nutrition practices of patients admitted to Harefield ITU in June, 2023 following critical illness against nutrition guidelines and ESPEN recommendations within 5 months.



1.Section 3: Feeding Initiation

Enteral tube feeding should be commenced within 24 - 48hrs of admission in all patients deemed unlikely to regain normal oral intake within 48 hours.

2. Section 5: Feed progression/incremental increases

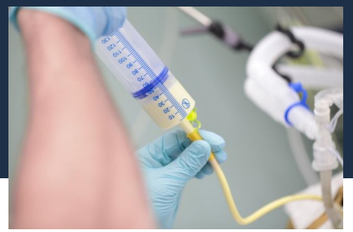
a. Unless contraindicated, Jevity Plus HP should be commenced at 20ml/hr for 6 hours and then the rate should be increased as per guidelines.

b. If patients have any of the following criteria, consider starting Jevity Plus HP at 10ml/hr and keep it at this rate until discussed with the ITU consultant at ward rounds:

I. Lactate >3
II. Right Ventricular failure on ECHO
III. 2 Vasopressors (1 must be vasopressin or adrenaline)
IV. Hypoxia PF ratio <13.3
V. Acidosis pH <7.2

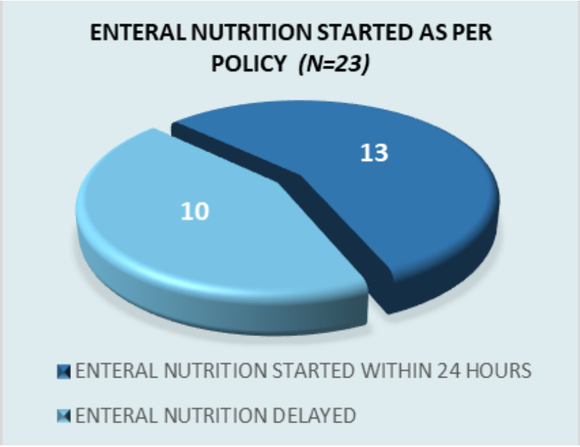
3. Section 9: Fasting for ICU procedures (*refer to the Fasting Flowchart in the guidelines Appendix 3*)

METHODOLOGY



- A retrospective analysis was conducted on data collected from patients records admitted to a cardiac ITU in June, 2023.
- Patients were identified from ICNARC database.
- Data was input into and analysed using Microsoft excel.
- 129 patients were admitted to ITU in June, 2023.
- 81/129 were hospitalised for a minimum duration of 24 hours
- 23/81 were identified as unlikely to regain oral intake within 24-48hours of ITU admission.

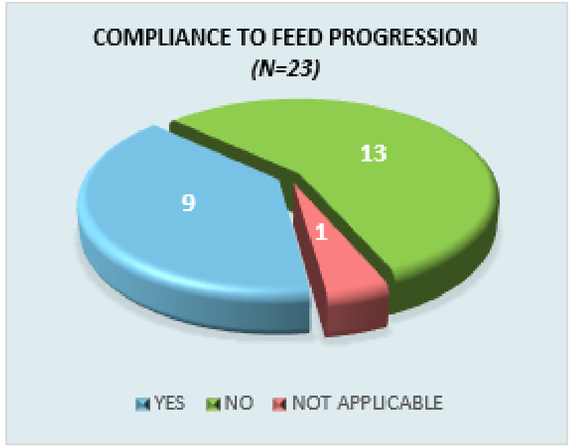
RESULTS



- Figure 1. Number of patients at which enteral nutrition was started as per local policy

Reasons for Delayed Enteral Nutrition

a. High dose pressors - 4
b. Trial extubation - 2
c. Acutely unwell - 2
d. Inadequate knowledge on available nutrition regimen - 1
e. No documentation – 1



- Figure 2. Total number of patients at which feed progression rate was followed

REASON	EPISODES	AVERAGE TIME (hou
Extubation	15	7.2
Bronchoscopy	12	7.3
Gastric Residual Volume >400 ml	4	4
Unknown	4	7.5
Vomiting	4	9.7
Sedation hold	3	6
TOE	3	11.3
CT Scan	1	1
Awaiting Dietitian regimen for lactose intolerance	1	21

Table 1. Reasons for Suspension of Enteral Nutrition
Some patients had the enteral nutrition suspended multiple times within 7 days of admission.

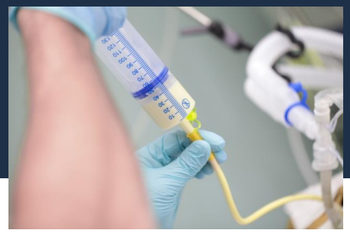
- Figure 3. Total Number of Patients with caloric goals met within 24 hours

- Figure 4. Total Number of Patients with 7-days Caloric Goals Met

Reasons for Unmet Caloric Needs

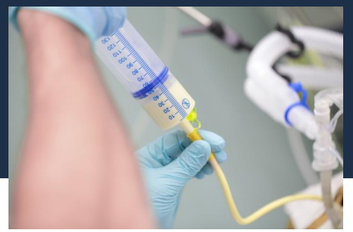
a. Enteral guidelines and fasting protocol not followed – 11
b. Prolonged suspension of nutrition for procedures – 3
c. Inadequate knowledge of enteral nutrition available - 1

DISCUSSION



- In summary, the findings from our audit indicate that a significant proportion of patients receiving enteral nutrition in our unit are not meeting their nutritional requirements optimally
- Despite the existence of a guiding protocol, dedicated dietitian input and support, staff (doctors and nurses) adherence appears suboptimal.
- Suboptimal adherence to protocols among staff is attributed to poor attitude of staff towards nutrition in critical illness exacerbated by inadequate knowledge regarding nutrition in critical illness, nutrition support guidelines and fasting protocols.

RECOMMENDATIONS



- Incorporating teachings on nutrition in critical illness into the orientation program for newly joined nurses and doctors.
- Include nutrition sessions into the bedside teachings emphasising nutrition protocols/guidelines and fasting protocols. Training and teaching sessions are to empower nurses to speak up and adhere to guidelines/protocols.
- Supporting and involving advanced (nursing) practitioners to confirm N/G placements to reduce the delayed times awaiting N/G placement confirmation.
- Re-audit in 6 months time from January.

LIMITATIONS

- Small sample size.
- Lack of protected time
- ICNARC patient database was used to access patient data regarding the audit.

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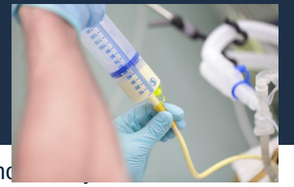

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