



**Service Priorities and Programmes**  
**Electronic Presentations**

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**Early feeding of, length of Stay(LOS) and mortality of Intensive Care Unit(ICU) Patient**

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Nutrition

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**Introduction**

Critically ill patients are under a hyper-metabolic, catabolic depletion state. Timely nutrition support is crucial in reducing complications and promoting recovery. Evidence suggests early feeding, with feeds started within 48 hours after ICU admission, improves clinical outcomes, reduces LOS and mortality.

**Objectives**

1.To investigate the time lapse between ICU admission and starting of feed 2.To identify the group of patient in whom feeding was delayed. 3.To compare the LOS and mortality of patients who started feeds early vs late.

**Methodology**

A prospective cohort audit was conducted on 407 ICU patients. Pediatric patient and patients being seen by dietitians were excluded. Outcome measures include time(hours) to starting feed (oral, enteral and parenteral nutrition) after admission, LOS and mortality. Mean time-lapse and LOS were analyzed using student t-test and mortality was analyzed by using Chi square test with SPSS version16. The level of significance was set at  $p < 0.05$ .

**Result**

1.Total of 257(63%) patients had feeds started during ICU stay. The mean time between admission and starting feed is 37hours for all patients.(Table 1) Table 1: Mean times lapse between admission and starting feed Admission Category N Mean time lapse(hrs) Surgical GI 37 63 (p-value0.001) Surgical non-GI 31 32 Neurology 53 30 Medical 98 34 Other 38 35 BMI Category BMI $\leq$ 18.5 10 61 p-value=0.003 BMI=18.5-22.9 36 43 BMI=23-29.9 42 28 BMI $\geq$ 30 7 60 2.Patients with feeds started after 48 hours had significantly higher LOS and mortality compared to patient who started feed early.(Table 2) Table 2:LOS and mortality of ICU patient started feed at different time. Total N ICU LOS ICU Death (Days) N (%) Feed not started150 1.9 14(9.3%) 0-48hours 197 4.2 13(6.6%) 49-120hours 51 8.0 10(19.6%) >120hours 9 16.4 3(33.3%) p-value=0.000 p-value=0.004 Discussion: Gastrointestinal surgery, underweight(BMI<18.5) and obese(BMI>30) patients were found to have started feed >48 hours after admission. After discussing with our ICU team, our ICU feeding

protocol was revised to exclude these patients and to refer these patients for Dietitian for early nutrition assessment. Conclusion: Overall, early feeding is achieved in our ICU unit. However, a proportion of patients in whom initiation of feeding was delayed was found. Mortality and LOS are higher in these patients. Therefore early feeding should be promoted in ICU nutrition practice.