

## **Clinical Research (Including Outcomes of Intervention)**

### **Description of calorie and protein provision in enterally-fed, mechanically ventilated VGH ICU patients during the first 7 days of admission**

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**Introduction:** Enteral nutrition (EN) is the preferred route for feeding mechanically ventilated (MV), critically ill patients. Initiating early EN, minimizing feeding interruptions, and receiving adequate nutrition support can improve health outcomes. Currently, the number of MV patients receiving at least the recommended 80% of calorie and protein requirements at Vancouver General Hospital (VGH) is unknown.

**Objectives:** (1) Describe the demographics of MV ICU patients who received EN within the first 7 days of admission; and, (2) determine the adequacy of calories and protein delivered and barriers to EN during these first 7 days.

**Methods:** A retrospective chart review was conducted for 84 VGH ICU patients admitted between April 1, 2019 and June 30, 2019. This study included patients over 18 years old, intubated on the day of admission, continuously MV for at least 7 days, and had EN initiated within those 7 days. Data collected included demographics, anthropometrics, registered dietitian tube feed order, formula and volume received, use of propofol and/or protein powder, and barriers to EN. Length of stay, and calories and protein delivered were calculated. Descriptive statistics were used to determine the proportion of patients receiving 80% of calorie and protein requirements.

**Results:** Of the 35 patients included (28 female and 7 male; mean age of 57), 65% (n=23) received 80% of their caloric and protein needs through EN across a 7-day average. The most common barrier to EN was procedures (50%).

**Conclusions:** Our findings suggest that the majority of MV ICU patients admitted to VGH received 80% of their nutritional needs through EN. However, there are opportunities to continue closing this gap and mitigate barriers to EN.

**Significance:** This study provides insight into developing new protocols to help patients achieve nutritional adequacy and improve dietetic practice within the VGH ICU.