Byrdine F. Lewis School of Nursing and Health Professions
Georgia State University
Graduate Program in Health Professions

Thesis Announcement

From:	Department Chair
Cc:	Graduate/Doctoral Program Coordinator Office of Academic Assistance Advisor

RE: Defense Date

X Health Professions – Nutrition Thesis

☐ Health Professions – Respiratory Therapy - Thesis

Student Name: Lindsay Ryan	Date: (i.e. January 23, 2012) October 24, 2018	Time: (AM/PM) 10:00 AM
Location: Urban Life Building	Room#: 839	Thesis Chairperson: Anita Nucci

Thesis Title:
Methods of Assessing Energy Requirements in Critically Ill Adults before Publication of New Critical Care Guidelines

Abstract:

Background: Energy requirements can be difficult to determine in the critically ill population due to the presence of catabolic stress. The 2009 Guidelines for the Provision and Assessment of Nutrition Support Therapy Parenteral and Enteral Nutrition and in the Adult Critically Ill Patient recommend that energy requirements be calculated by predictive equations or weight-based equations or measured by indirect calorimetry (IC) and that nutrition efficacy may be monitored through nitrogen balance (24-hour Urinary Urea Nitrogen) or non-protein calorie:nitrogen ratio. Very few studies have reported the required energy assessment methods used by Registered Dietitian Nutritionists (RDNs) in the critical care setting and no studies have reported the use of laboratory tests to monitor efficacy of nutrition. The purpose of the study is to examine practices for estimating energy requirements in critically ill patients by RDNs prior to publication of the updated critical care guidelines in 2016. Methods: The study sample included patients currently included in the trauma registry at Grady Memorial Hospital (GMH). Patients who were in motor vehicle accidents (excluding trains), who were admitted to the Intensive Care Unit at GMH between July 4, 2014 and September 28, 2015, and who required at least five days of mechanical ventilation during admission were included. Demographic characteristics (gender, race, and age), anthropometric characteristics (body mass index classification), clinical characteristics (number of days on the ventilator, ICU days, time to death)), and nutrition assessment methods (energy assessment method used, weight used in assessment, and laboratory monitoring recommendations) were extracted from the electronic medical record. Results: The vast majority of Registered Dietitian Nutritionists (98%) used a simple weight-based equation during the initial nutrition assessment. Approximately 1/3 of the Registered Dietitian Nutritionists used the actual patient body weight (36.8%) with the remaining primarily using a recommended body weight based on a selected BMI. Nine different weight-based equations were used with the equation 25-30 kcal/kg used most often (87.9%). Indirect calorimetry was not recommended by the RDNs during the first two weeks of admission for any patient. RDNs recommended prealbumin to monitor nutrition status (within 2 weeks of admission) in 21.6% of patients. Conclusions: We observed inconsistencies in the equations, weights, and monitoring laboratory tests used by RDNs. This variability can be attributed to a lack of specificity in the 2009 critical care guidelines, which justifies the need for updated recommendations in 2016. Future studies should examine change in nutrition assessment practices by RDNs since publication of the 2016 guidelines.

Signature Department Chair:- Nutrition:	Signature Department Chair:- Respiratory Therapy:
Committee Member	Committee Member
Committee Member	Committee Member
Committee Member	Committee Member

This form should be sent to web coordinator after approval from Department Chair Nutrition/Respiratory Therapy.
Created 1/31/2012, approved

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