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Influence of Asian and Non-Asian Nursing Home Residents’ Nutritional Intake Patterns on Pressure Ulcer/Injury Outcomes

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Purpose: Older adults in nursing homes (NH) are at risk for pressure ulcer/injury (PrU) development as a result of medical comorbidities and NH residency. Nutrition is also important for prevention and healing of PrU and commercial supplements and snacks, are common adjuncts to well-planned meals. The contribution of estimated protein servings, meals, tube feedings, snacks, and supplements to overall nutritional intake and PrU development among Asian and nonAsian Canadian NH residents were explored by determining the influence of overall nutritional risk and dietary intake on PrU development.

Methods: Nutritional outcomes for NH residents at moderate and high PrU risk were examined in a multisite clinical trial conducted in NHs (n=27 NHs; 942 residents consented) in the United States and Canada to determine the efficacy of repositioning schedules on PrU incidence. Meal intake frequency, percent intake, and number of protein servings consumed were examined along with PrU development and ulcer stage. Bivariate analyses tested for significant differences in dietary intake between and within PrU risk groups among Asians and nonAsians in 7 Canadian NHs subsample.

Results: Canadians developed 48% of the 21 new PrUs with 10 Stage II ulcers. Canadians (n=505) were at moderate or high risk (Braden score 13-14 and 10-12) of PrU development. Canadians of Asian descent had greater incidence (6 ulcers; 60% of total) in 5 residents. Underweight BMI (<18.5) occurred in 66.4% Asians and 19.08% of non-Asians. More Asians (15.7%) than nonAsians (2.4%) were tube fed. Only nonAsians
who were at moderate risk for PrU development consumed more servings of all protein types; yet, moderate and high risk Asians combined consumed more milk (12%) and meat (20%), and higher percentages of supplements when compared to snacks.  

**Conclusion:** Protein is vital to building and repairing cells, but protein processing ability declines with age. Excess protein leads to dehydration, vomiting, appetite loss, and diarrhea. Further, the majority of Asians (90%) are lactose intolerant. Increased milk intake levels and milk based supplements may have led to diarrhea and subsequently acidic urine. Skin irritation associated with acidic urine and observed increase in wet observations with less barrier cream use, may have predisposed Asians to PrU development.

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**Abstract Describes:**  
Completed Work/Project

**Applicable category:**  
Clinical, Academic

**Keywords:**  
Braden Scale, Nutritional Risk and Pressure Ulcers

**References:**


Abstract Summary:
Secondary analysis of TURN study data determined the influence of overall nutritional risk and dietary intake on pressure ulcer/injury (PrU) development. The contribution of estimated protein servings, meals, tube feedings, snacks, and supplements to overall nutritional intake and PrU development among Asian and non-Asian Canadian NH residents was explored.

Content Outline:

Learning Objectives: The learner will be able to:

1. Explain the importance of nutrition for prevention and healing of pressure ulcers as part of a pressure ulcer/injury prevention protocol.

2. Identify factors, including a resident’s culture that may influence how estimated protein servings, meals, tube feedings, snacks, and supplements can be most effectively used as part of a nursing home resident’s overall nutritional intake to prevent pressure ulcer/injury development.

3. Discuss the contribution of this research to nursing practice aimed at pressure ulcer/injury prevention.

Expanded Content Outline:

1. Introduction and purpose of the study.
2. Review of how the Braden Scale for Pressure Sore Risk® and its subscales are used in assessing overall risk for pressure ulcer development in conjunction with pressure ulcer/injury prevention care practices.

1. Overview of the TURN study design with emphasis on measurement and secondary data analyses of resident dietary intake and weight outcomes.

2. Consider ways in which resident risk factors and other culture-based factors may influence nutritional intake and pressure ulcer/injury incidence.

1. Discuss clinical and research insights regarding nutritional intake and the implications of protein servings and types of supplements on pressure ulcer/injury prevention outcomes.