



Integrating Clinical Practice and Research: Hospital Acquired Pressure Ulcer Development and the Association with Nutritional Status

Natasha J. Miller BSN, RN, CCRN, CWOCN; Victoria Schirm Ph.D., RN;
 Melissa Maguire B.S.N., R.N.–B.C.; David Frankenfield M.S., R.D.
 Penn State Milton S. Hershey Medical Center

BACKGROUND

Nutritional evaluation is an important component in assessing risk for pressure ulcer development. Limited evidence exists regarding solid indicators for such an evaluation (Doughty, 2008). This project started as a quality improvement initiative. Observations in clinical practice showed that threshold scores on the Braden nutrition subscale resulted in many clinical nutrition consults occurring due to “false positives.” To better understand what was happening, clinical nutrition interns reassessed Braden Scores on 147 patients. Findings showed for 68% of cases a

Braden-triggered consult directed the dietitian to a patient who did not require nutrition intervention; and 62% of patients with a nutrient intake deficit and low Braden score were not identified for intervention. Other findings included identification of 13 patients where nurses indicated need for a nutrition consult, and identification of 14 patients that nutrition interns indicated needed a consult. In only 5 patients was there agreement between the two assessments. This inefficient use of resources and lost opportunities for appropriate intervention prompted the need for further investigation.

CLINICAL DATA VERSUS RESEARCH DATA

The data collection process uncovered challenges that included documentation changes reflecting regulatory requirements, patients’ condition, clinical workflow and enhanced electronic tools. One example is that BMI calculation requires height and weight documentation. During a portion of our data collection only weight

documentation was required resulting in missing data for our study. In addition, the layout of our Nutritional Risk Factor documentation changed and required adjustments in creating our research database.

Nutritional Risk Factors			
	Yes	No	Comment
*Impaired intake for at least 2wks.		X	
*Current impaired intake		X	
*Persistent NV/Diarrhea>2wks.		X	
*Currently experiencing NV,Diarrhea?	X		
*Currently pregnant?		X	
*Nausea		X	
*Enteral Feedings		X	
*IPN Feedings		X	
*Skin Breakdown/Decubitus Ulcers		X	

Unintentional Weight Loss

Yes
 No

Estimated Amount of Weight Loss: kg

Time Frame of Weight Loss:

Time that patient has snacks:

Height: cm

BMI:

Height Method: Standing
 Lying
 Estimated
 Actual
 Patient stated

Patient Weight: kg

Med Dosing Weight: kg

Weight Method: Bed Scale
 Broselow Tape
 Chair Scale
 Estimated
 Infant Scale
 Patient stated
 Standing Scale
 Other

Variable	Definition	Measurement
Braden Nutrition Scale	Usual food intake pattern.	Recorded by nurses in patient record as “very poor”, “probably inadequate”, “adequate”, or “excellent”.
Body Mass Index (BMI)	Measure of body fat based on height and weight.	Assessed on admission and automatically calculated and documented in patient record.
Nutrient Intake	Patient asked “Has your food intake decreased in the last week?”.	Assessed on admission to the hospital and recorded in the patient chart as “yes” or “no”.
Weight Loss	Patient provides amount of weight loss and time frame of weight loss.	Assessed on admission to the hospital and recorded in patient chart as “yes, history of weight loss” or “no history of weight loss”.

OBJECTIVES

1. Describe components essential to initiating, developing, and assembling a multidisciplinary team for applied clinical research.
2. Identify collaboration and consultation needed for protocol development, data acquisition and analysis.



The project was expanded to an IRB approved study, with a research team consisting of Clinical Nutrition, Wound, Ostomy, and Continence Nursing, Nursing Research, and Nursing Informatics.

SUMMARY

- Collaboration between nursing and non-nursing professions can be fruitful in obtaining research funding and in discovering new knowledge for practice.
- The direction taken in a project will be different when it is multidisciplinary than if a single discipline undertakes the project alone.
- Acceptance of the research findings and solutions to problems are more easily embraced by all disciplines if all disciplines are part of the research.

Bibliography

Doughty, D. B. (2008). Prevention and early detection of pressure ulcers in hospitalized patients. *Journal of Wound, Ostomy and Continence Nursing*, 35(1), 76-78.
 Wilson, M. L. & Newhouse, R. P. (2012). Meaningful use: intersections with evidence-based practice and outcomes. *JONA*, 42(9), 395-398.