



# New 2014 Nutrition Guidelines for Pressure Ulcers

by Brenda Richardson, MA, RDN, LD, CD, FAND

**P**ressure ulcers are not a new challenge to healthcare providers as there continues to be a focus (in the United States and internationally) on effective prevention and management. Pressure ulcers are painful, costly, and often preventable complications that threaten many individuals in hospitals, nursing homes, and home care. They remain a frequently occurring healthcare problem throughout the world.

More recent national studies fail to demonstrate sustained significant declines for pressure ulcers in healthcare settings. There is often higher prevalence and incidence in

those receiving palliative care in home hospice, those with spinal cord injuries, and in critical care units. Pressure ulcers truly represent a major burden of sickness and reduced quality of life for patients and their healthcare providers.

Studies support increased morbidity and mortality associated with pressure ulcer development in hospitalized patients and that hospital lengths of stay, readmission rates, and hospital charges are greater in patients who develop pressure ulcers than in those remaining ulcer-free. The development of a single pressure ulcer in U.S. hospitals



can increase a patient's length of stay five-fold and increase hospital charges by thousands of dollars.

In the United States we see continued support of "best practice" with prevention and management of pressure ulcers from the Centers for Medicare & Medicaid Services (CMS). Regulatory guidance to surveyors in determining compliance reflects use of "best practice." There are now outcome measurements which not only reflect measures of quality, but are linked to reimbursement paid to providers.

This article will explore the National Pressure Ulcer Advisory Panel's release in summer 2014, *Prevention and*

*Treatment of Pressure Ulcers: Clinical Practice Guideline*, and offer a summary of the most current nutrition interventions.

## BACKGROUND

In 2009, after a four year collaboration with the European Pressure Ulcer Advisory Panel (EPUAP), the National Pressure Ulcer Advisory Panel (NPUAP) published the Pressure Ulcer Prevention and Treatment Clinical Practice Guideline. The nutrition work group included Mary Ellen Posthauer, RDN, CD, LD, FAND; Becky Dorner, RDN, LD, FAND; David R. Thomas, MD, FACP, FAGS, AGSF; and Steven Black, MD. It's important to remember that the guidelines used are systematically developed statements to assist practitioner decisions about appropriate health care for nutrition interventions. The nutrition guidelines have been widely disseminated and, when appropriate following the completion of an individualized nutrition assessment, can be incorporated into practice.

## THE 2014 EDITION

The second edition of the guidelines, published in August 2014, included the addition of members from the Pan Pacific Pressure Injury Alliance (PPPIA). The goal of this international collaboration was to develop evidence-based recommendations for the prevention and treatment of pressure ulcers that could be used by health professionals throughout the world. As in the previous guideline development process, a specific scientific methodology was used to identify and critically appraise all available research. Nutrition research studies of pressure ulcers in humans were considered direct evidence and supported an A or B strength of evidence rating. In the absence of definitive evidence, expert opinion (often supported by indirect evidence and other guidelines) was used to make a C strength of evidence recommendation. Drafts of the recommendations and supporting evidence were made available to 986 invited stakeholders (individuals and organizations) around the world. The small work group reviewed all the stakeholder comments, including any additional evidence suggested, prior to approving the recommendations. The final guideline is based on available research and the accumulated wisdom of the NPUAP, EPUAP, PPPIA, and international stakeholders.

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**N**utrition plays a vital role in prevention and management of pressure ulcers, and use of the new 2014 guidelines allows us to offer clients evidence-based healthcare for positive outcomes.

In the new edition of the guideline, a consensus voting process (GRADE) was used to assign the strength to each recommendation, which is an important addition to the rigorous guideline process. The strength of recommendation is a rating beyond the evidence that identifies the importance of the recommendation statement based on the potential to improve individual outcomes. It includes consideration to the overall measure of harm versus benefits (including side effects, hazards, cost effectiveness, feasibility) if the recommendation was implemented. The Academy of Nutrition and Dietetics Evidence Analysis projects use a similar rating process for implementing recommendations. The strength of recommendation provides an indication to the practitioner of the confidence they can have that the recommendation will do more good than harm. When recommendations are rated a strength of

evidence of C, it is because it's not possible to implement high quality studies to support the recommendation. However, clinicians would agree that many of the recommendations are essential. For example, assessing the individual's ability to eat independently has a C Strength of Evidence but a strong positive; definitely do it Strength of Recommendation.

The 2014 nutrition guidelines were developed for adults and address the importance of assessing the risk of malnutrition, which can increase the risk for pressure ulcers and impede the healing process. Guidelines include:

- Nutrition Screening
- Nutrition Assessment
- Care Planning
- Energy Intake
- Protein Intake
- Hydration
- Vitamins and Minerals

The guideline includes ratings of specific Strength of Evidence and Strength of Recommendation. Some examples of recommendations included in the 2014 guidelines are:

- Screen nutritional risk for each individual at risk or with a pressure ulcer: at admission to a healthcare setting, with each significant change of clinical condition, and/or when progress toward pressure ulcer closure is not observed.
- Use a valid and reliable nutrition screening tool to determine nutrition risk.
- Refer individuals screened to be at risk of malnutrition and individuals with an existing pressure ulcer to a registered dietitian or an interprofessional nutrition team for a comprehensive nutrition assessment.
- Assess weight status to determine weight history and identify significant weight loss.
- Assess ability to eat independently.
- Assess adequacy of total nutrient intake.
- Develop an individualized nutrition care plan for individuals with or at risk of a pressure ulcer.
- Follow relevant and evidence-based guidelines on nutrition and hydration for individuals who exhibit nutritional risk and who are at risk of pressure ulcers or have an existing pressure ulcer.

## REFERENCES

National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Quick Reference Guide. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014.

- Provide individualized energy intake based on underlying medical condition and level of activity.
- Provide 30 to 35 kcalories/kg body weight for adults at risk of a pressure ulcer who are assessed as being at risk of malnutrition.
- Provide 30 to 35 kcalories/kg body weight for adults with a pressure ulcer who are assessed as being at risk of malnutrition.
- Offer 1.25 to 1.5 grams protein/kg body weight daily for adults at risk of a pressure ulcer who are assessed to be at risk of malnutrition when compatible with goals of care, and reassess as condition changes.
- Offer 1.25 to 1.5 grams protein/kg body weight daily for adults with an existing pressure ulcer who are assessed to be at risk of malnutrition when compatible with goals of care, and reassess as condition changes.

The guidelines also include recommendations for use of nutritional supplements, assessment of renal function, supplementation with high protein, arginine and micronutrients, hydration, and vitamin/mineral supplementation.

Since there were several new studies that incorporated a high protein supplement enhanced with arginine, and micronutrients, such as vitamin C, a separate recommendation addresses this topic. The recommendation is for adults with Stage III or IV or with multiple pressure ulcers and suggests that traditional high calorie supplements should be offered prior to implementing this guideline. All of the nutrition guidelines received either a strong positive, definitely do it or a weak positive, probably do it Strength of Recommendation. Considering that clinicians throughout the world may implement these guidelines, the work group considered the feasibility of implementation. As noted in the assessment guideline, some countries have limited access to and/or a limited number of registered dietitians and utilize an interprofessional team to assess nutritional status. Obtaining high protein supplements or vitamin and mineral supplements may be cost prohibitive in some areas of the world.

**These new guidelines and a downloadable Quick Reference Guide are available at: <http://www.npuap.org/now-available-new-2014-international-pressure-ulcer-guidelines/>**

Along with nutrition, the guideline includes 575 explicit

recommendations and/or research summaries for the following pressure ulcer topics: etiology; prevalence and incidence; risk assessment; skin and tissue assessment; preventive skin care; prophylactic dressings; microclimate control; fabrics and textiles; repositioning and early mobilization; support surfaces; medical device related pressure ulcers; pressure ulcer classification; wound assessment; monitoring of healing; pain assessment and treatment; cleansing; debridement; wound dressings (including growth factors and biological wound dressings); assessment and treatment of infection and biofilms; biophysical agents (e.g. electrical stimulation, negative pressure wound therapy, electromagnetic field treatment); and surgery.

The guideline also includes the NPUAP/EPUAP International Pressure Ulcer Classification system, complete with full Category/Stage descriptions and illustrative photography.

Pressure ulcers have been and will continue to be a focus area for healthcare providers. Nutrition plays a vital role in prevention and management of pressure ulcers and use of the new 2014 international pressure ulcer guidelines allows us to offer our clients evidence-based healthcare for positive outcomes. These new guidelines assist providers in prevention and management of pressure ulcers based on the evidence-based strength, and strength of the recommendation. This strength of the recommendation encompasses the idea that we include consideration to the measure of harm versus benefits to the client if implemented.

These new guidelines are a “best practice” resource and help support resident choice and resident-directed care in prevention and management of pressure ulcers. **E**



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