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National Pressure Ulcer Advisory Panel

the NPUAP

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### PRESIDENT'S MESSAGE

## Thanks for Asking!

Joyce Black

Since February, when we met to discuss the proposed changes in the definitions of pressure ulcer stages, we have heard from many of you. While it may have taken a while to respond due to the volume of questions, we appreciated hearing from you. I thought I would share some of the more common questions and our responses.

### *When can we start using these definitions?*

While the answer to this question may seem obvious, there is actually a more complex question. Obviously, for health care systems that have developed their own charting systems...go ahead and start. But for long term care and home care, whose documentation forms come from the government, the MDS and OASIS documents no longer match. We advise that you comply with the governmental documentation, but use the clinical or narrative notes to describe what you are seeing. The issue comes to light with deep tissue injury (DTI). If none of the governmental forms lists DTI, it is our advice to "stage" DTI as unstageable for now, because in reality the true extent of the ulcer cannot be seen. If the skin is purple or bruised and intact, using the "stage I" label does not represent the problem well at all. Of course, it has been understood that unstageable ulcers will be débrided and then their true depth will be evident and not all DTI will be débrided; hence the residual misfit of using the unstageable label.

### *Once an DTI evolves into an ulcer, how should it be staged?*

Deep tissue injury is an etiology of pressure ulcer formation. If the ulcer evolves into an open ulcer, it should be staged using the other stages. This is not different from a stage I or II evolving into a stage III or IV ulcer.

### *Are you sure that stage II pressure ulcers don't have slough?*

Stage II ulcers are very shallow (recall the human skin is only 4 mm thick in calloused areas) and NPUAP has taken the stance that the loss of just skin cannot lead to slough. Recent literature supports the idea that slough is a biofilm, adherent to the base of the ulcer. Lactoferrin in the tissues normally prevents biofilm formation. Therefore, the loss of skin would eliminate lactoferrin and promote biofilm formation.

### *Who should stage pressure ulcers?*

While it was the goal of NPUAP to clarify the stages, staging still requires a good understanding of both anatomy and differential diag-

noses of wounds. Stage III pressure ulcers will remain one of the most difficult to stage. They can be shallow or deep depending on the amount of the adipose tissue, so nurses without a good understanding of the composition of body tissues could still have problems with accuracy. Ultimately, each facility will have to decide how to proceed with this question, but NPUAP believes that the professional who stages the pressure ulcer must be certain the wound is a pressure ulcer first, able to accurately identify the anatomical location and then assign the stage based on tissue loss. If the most likely person to stage accurately is a wound care professional in your institution, there would be no disadvantage to requiring staff nurses to describe what is seen, such as 4 cm open area on left ischium rather than stage the ulcer.

### *Where can we get drawings of the stages and photographs that we can use for teaching?*

NPUAP will provide slides and the artwork on the updated staging system along with photographs of each stage. You will be able to download the material from our website soon. We appreciate your willingness to "spread the news" about staging!

• • •

Updating the stages of pressure ulcers was a big undertaking. We thank you for helping with the task. Thanks too for asking these great questions.

Joyce Black  
NPUAP President

## Wound Care Guidelines of the Wound Healing Society: Foreword

By Adrian Barbul, MD, FACS  
President  
The Wound Healing Society

The following article first appeared in *Wound Repair and Regeneration* in 2006.

The publication of the Wound Care Guidelines by the Wound Healing Society (WHS) in the present issue of *Wound Repair and Regeneration* represents the culmination of a three-year effort involving numerous individuals and entities. As the Principal Investigator and Chief Editor of this work, I think that a brief history of the genesis and completion of this project is absolutely necessary. In addition, it allows for the recognition of the effort by so many into the development of this project.

In early 2003, the Wound Healing Foundation (WHF), under the leadership of Dr. Elof Eriksson, put out a request for proposal (RFP) for a project to formulate and publish "Minimal Standards for the Diagnosis and Treatment of Chronic Wounds: General and Specific." The RFP recognized that "... the prevalence of chronic wounds and their costs to society are staggering." The RFP further emphasized that the most common chronic wounds—pressure ulcers, venous stasis ulcers, and diabetic foot ulcers—are increasing in prevalence in the United States population, owing primarily to an ever-increasing number of elderly patients. Moreover, despite many recent advances in wound care, the challenge of managing chronic wounds is

compounded by the current lack of uniformly accepted diagnostic methods to evaluate outcomes and consensus on clearly defined, comprehensive wound care standards.

The RFP also emphasized "... that the proposal be broad enough to encompass the diagnosis and treatment of chronic wounds in general and have specific guidelines for pressure ulcers, diabetic foot ulcers, venous ulcers, and ischemic ulcers. The guidelines must be arrived at by consensus and be evidencebased. All guidelines that have been proposed by organizations, societies, panels, and agencies should be considered and details included as to the reasons for inclusion or exclusion. . . . Minimal components should include: (1) Literature review, (2) Definitions, (3) Diagnostic criteria, (4) Patient stratification, (5) Co-morbidity, (6) Wound bed preparation, (7) Specific wound treatment, (8) Whole patient treatment, if appropriate, (9) Continuing care, and (10) Treatment efficacy/outcome measures."

There were six submissions forwarded to the WHF, including one that the WHS, under President Lillian Nanney, charged me to write and submit. The WHS was extremely gratified when its proposal was accepted for completion. The committees and respective Chairs were selected and charged with the necessary research and writing in June 2005. The successful completion of their task within a short period of 6–8 months bespeaks of their hard work, dedication to the goals of the project, and unwavering commitment.

Several unique features of this project need to be stressed. First, consensus was the order of the day and was maintained throughout: in the broad and comprehensive research of existing literature; in the makeup of work groups to include all specialties, disciplines, professional degrees, or societies (various clinical fields such as dermatology, endocrinology, vascular surgery, plastic surgery, podiatric medicine, geriatrics, nursing, dietetics/nutrition, rehabilitative services, and prosthetics are all represented); in the application of Delphi process in that the vast majority of the group had to be in agreement with any pronouncement or recommendation; and finally, in the seeking of input from all interested parties, societies, and industry at publicly held fora on the National Institutes of Health (NIH) campus in October 2005 and February 2006.

*Continued*

### COMPANY INTRODUCTION: DM Systems, Inc.

**DM Systems, Inc.** is a small veteran owned company founded in 1979 by an orthopedic surgeon for the design, manufacture and distribution of medical devices in the wound care, rehabilitation, and casting accessory markets.

The Heelift® line of friction, shear, and pressure redistribution products includes the Heelift® Original of convoluted foam for improved ventilation. The Heelift® Smooth was added in 2000 to address the issue of skin indentations in edematous patients. The Elbowlift® incorporates the same principles of pressure reduction and redistribution as the Heelift®. It offers almost complete pressure reduction, shear and friction prevention for the injured elbow. The Heelift® line is unique for being completely customizable to individual patient requirements.

Because of the high incidence of heel and malleolar pressure ulcers in patients with hip and femur fractures, the Heelift® Traction Boot was recently introduced and received widespread market approval.

The rehabilitation division markets three unique devices addressing ankle sprains, shoulder instability, and bed or wheelchair bound muscular rehabilitation.

The casting accessory division offers fixed and removable weight bearing cast walkers for cast protection and impact loading dissemination, and products to facilitate cast adjustments.

Located in Evanston, Illinois, DM Systems distributes its products throughout the United States, Europe, the Middle and Far East, and Canada.

## Wound Care Guidelines continued

The astute reader will notice that the term standard was dropped in favor of the term guideline. It was felt that the latter term more accurately reflected the intent, the often lack of strong evidence or the legal implication of the former term. Unique to these documents are the inclusion of animal data as reflective of biological if not necessarily clinical evidence; the lack of any "agenda" as no industrial or other interest group or funding was sought; and finally the inclusion of clinicians, academicians, and bench scientists in the group.

The RFP also called for "... the applicant ... to have consultative expertise from industry, governmental agencies, and third party payers." This aspect of the project has also begun. WHS and WHF representatives have had substantive talks with various agencies such as the Center for Medicare and Medicaid Services and the Joint Commission on Accreditation of Healthcare Organizations to seek ways in which these guidelines can help shape healthcare policy and economics. Endorsement is being sought from other societies and professional groups.

The publication of the current set of guidelines represents only a beginning. The WHS has formed a "Guideline Update Committee" chaired by Dr. Martin Robson, whose duties include the continued examination of the validity and currency of the documents as well as their periodic update and republication.

I would like to conclude by recognizing several individuals who have helped and encouraged me in this project: Dr. Elof Eriksson, whose unwavering trust, help, and friendship have been invaluable and who remains as committed today as he was in 2003 to the value of this project; his efforts in diplomacy and science are a constant source of inspiration. Dr. Lillian Nanney, whose faith and trust in me was an impetus to complete the project; to the Chair of the four committees: Drs. Martin Robson, David Steed, Harriet Hopf, Joie Whitney, and Linda Phillips, all of whom kept their focus, the time frame imposed, and required virtually no "urgings" on my part; all committee members whose work is truly represented here; Dr. William Lindblad, Editor in Chief of Wound Repair and Regeneration, who helped in the final preparation and publication; and finally, Dr. Cynthia Lander, who believed in the project from the beginning, helped enormously with the RFP response but whose professional commitments diverged during the duration of the project. ■

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### Submit Your 2008 WUWHS Abstract NOW!

Go to <http://portal.wuwhs2008.ca> for detailed information.

If you wish to discuss submission of an abstract,  
information is provided on the website.

If in North America, toll-free number is 1-888-512-8173.

## NPUAP Corporate Advisory Council Member Spotlight

## Sage Products, THE INTERVENTIONAL PATIENT HYGIENE COMPANY

**S**age Products has a core belief in prevention—that evidence-based interventions will improve patient outcomes. As a member of the NPUAP's Corporate Advisory Council, Sage is focused on helping healthcare facilities improve outcomes by preventing skin breakdown. Based in Cary, Illinois, Sage is the leading manufacturer of Interventional Patient Hygiene (IPH) products in hospitals nationwide.

Comfort Shield® Barrier Cloths deliver proven prevention and treatment of incontinence-associated dermatitis (IAD). By providing all-in-one incontinence cleanup and barrier protection, Shield has become the number one incontinence barrier in U.S. hospitals.<sup>1</sup> In one study, Shield helped reduce IAD, resulting in 86% fewer incontinence-related nursing consults.<sup>2</sup> Shield is also available with Peri Check, a unique, peel-and-stick label that empowers staff to observe and report IAD. By bringing supplies to the bedside, the new Shield Barrier Station helps improve protocol compliance.

Prevalon™ Pressure-Relieving Heel Protector delivers proven protection against heel pressure ulcers and plantar flexion contracture. In fact, a new study featuring Prevalon reduced heel pressure ulcers by 95%.<sup>3</sup> It also decreased healing time for existing wounds while reducing treatment costs. Prevalon is available with an innovative stabilizer wedge to minimize lateral foot and leg rotation.

Comfort Bath® Cleansing Washcloths eliminate contamination risks from basins and tap water during bathing. The nation's leading prepackaged bath<sup>1</sup> is available with Skin Check™, an exclusive peel-and-stick label that empowers non-licensed staff to observe and communicate developing skin issues. One hospital's Skin Check Program reduced the rate of hospital-acquired pressure ulcers by 67%.<sup>4</sup>

Sage's protocols and programs make it easier for facilities to achieve measurable results. Healthcare professionals can access these materials free at [www.sageproducts.com](http://www.sageproducts.com) or by calling 800-323-2200.

1. Hospital Products Information Services (HPIS), Hosp. Market Trend Report, 4th Qtr, 2006.
2. Dieter L, Drolshagen C, Blum L, Cost-effective, quality care for the patient with incontinence. Research poster abstract presented at the 2006 WOCN Conference, Minneapolis MN, 2006 Jun.
3. Burda V, A successful heel ulcer prevention program resulting in 95% reduction of heel ulcer incidence. Poster presented at the Symposium on Advanced Wound Care, Tampa FL, 2007 Apr.
4. Bayerl K, Boushley G, Effective utilization of nurse assistants for skin inspection and rapid response resulting in improved staff communication and patient outcomes. Poster presented at IHI's National Forum on Quality Improvement in Health Care, Orlando FL, 2006 Dec.

RESEARCH  
COMMITTEE  
UPDATE

## Shear Force Initiative Update

By Laura E. Edsberg, Ph.D. and Evan Call, M.S.

Pressure, shear, and friction forces are among the major factors contributing to the development of pressure ulcers. For many years research has focused on the effect of pressure on tissue, and the inverse relationship between pressure and time is well known. Interface pressure mapping has often been used to evaluate support surfaces and wheelchair cushions. The growing interest in deep tissue injuries has led to an increased interest in better understanding how shear contributes to the development of pressure ulcers. Studies have shown the presence of shear leads to more rapid tissue damage at lower normal forces.

Simple and necessary patient care, such as repositioning or raising the head, of the bed changes shear both externally and internally. Although shear is a major factor in the formation of pressure ulcers, several things remain unknown about the effects of shear on tissue. What is the effect of an external shear force on internal tissues? Which patients are at the greatest risk from shear forces? When does shear lead to tissue damage? These are all questions for which we do not yet have the answers.

A new research collaboration seeks to change that. The Shear Force Initiative, sponsored by Gaymar Industries, Inc., is a joint venture between the National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP), Japanese Society of Pressure Ulcers (JSPU), clini-

cians, and industry. The mission statement of the Initiative is to define, study, and measure shear and its effect on the various physiological, metabolic and physical characteristics that influence the assessment, prevention, treatment and development of pressure ulcers in order to improve patient management. The five working groups that make up the initiative are both clinical and engineering in focus. The focus of the groups is as follows: Group 1: Measurement of the effect of loading on tissue; Group 2: Support surface interaction with tissue response; Group 3: Devices to measure shear; Group 4: Clinical needs for improvement on shear; and Group 5: Definition and dissemination of various terminology concerning shear. Working Group 1, which is comprised of Groups 1 and 3, is working on a method that allows the characterization and validation of the devices intended for the measurement of shear. Working Group 2, which is comprised of Groups 2, 4, and 5, is working to understand the effects of shear on tissue and how external shear impacts tissues internally. As well, as working to disseminate the terminology associated with shear and the research findings.

Working Group 1 has prepared a method of calibration and validation of devices intended to measure shear. The method is now under evaluation for repeatability and reliability in multiple laboratories. This should provide the first step in providing the industry with

measures of shear in characterizing support surfaces and the effect of shear loading on tissue. At the meeting in February a discussion regarding the list of known and unknowns in the field was the starting point for Working Group 2. A survey was developed with the other working group and distributed at the NPUAP conference to address the needs for education within the area of shear. The results of the surveys will be analyzed and form the basis of the educational component of the website and future publications.

Answering the questions regarding shear and developing the method for calibration and validation of devices to measure shear will have a significant impact on patient care and outcomes. The Shear Force Initiative is an important step in this process.

The Shear Force Initiative meets twice each year, once in Europe and once in the USA. The last meeting was at the NPUAP Consensus Conference in San Antonio, Texas in February and the next meeting will be held in conjunction with the EPUAP Annual Conference in Oxford England, in August 2007. Please see the SFI website ([www.shearforceinitiative.com/](http://www.shearforceinitiative.com/)) for information on the conference. ■

### NPUAP RESEARCH COMMITTEE

The mission of the Research Committee of the National Pressure Ulcer Advisory Panel (NPUAP) is to identify and implement strategies for addressing gaps in the state of the science in pressure ulcer prevention, treatment, and education and to disseminate the results of [evidence-based] research applicable to the etiology, prevention and treatment of pressure ulcers. Currently, the research committee is involved in an initiative to conduct a review of the incidence and prevalence data published since 2000.

### UPCOMING EVENTS

#### Best Practice Conferences

Fall, 2007 - Minneapolis, MN  
September 21, 2007 - Omaha, NE  
October 22, 2007 - Kalamazoo, MI

#### S3I Conference

April 19-20, 2007 - Salt Lake City, UT

#### 11th NPUAP Biennial Conference

February 27-28, 2009  
Arlington, VA (Washington, DC Area)  
Hyatt Regency Crystal City