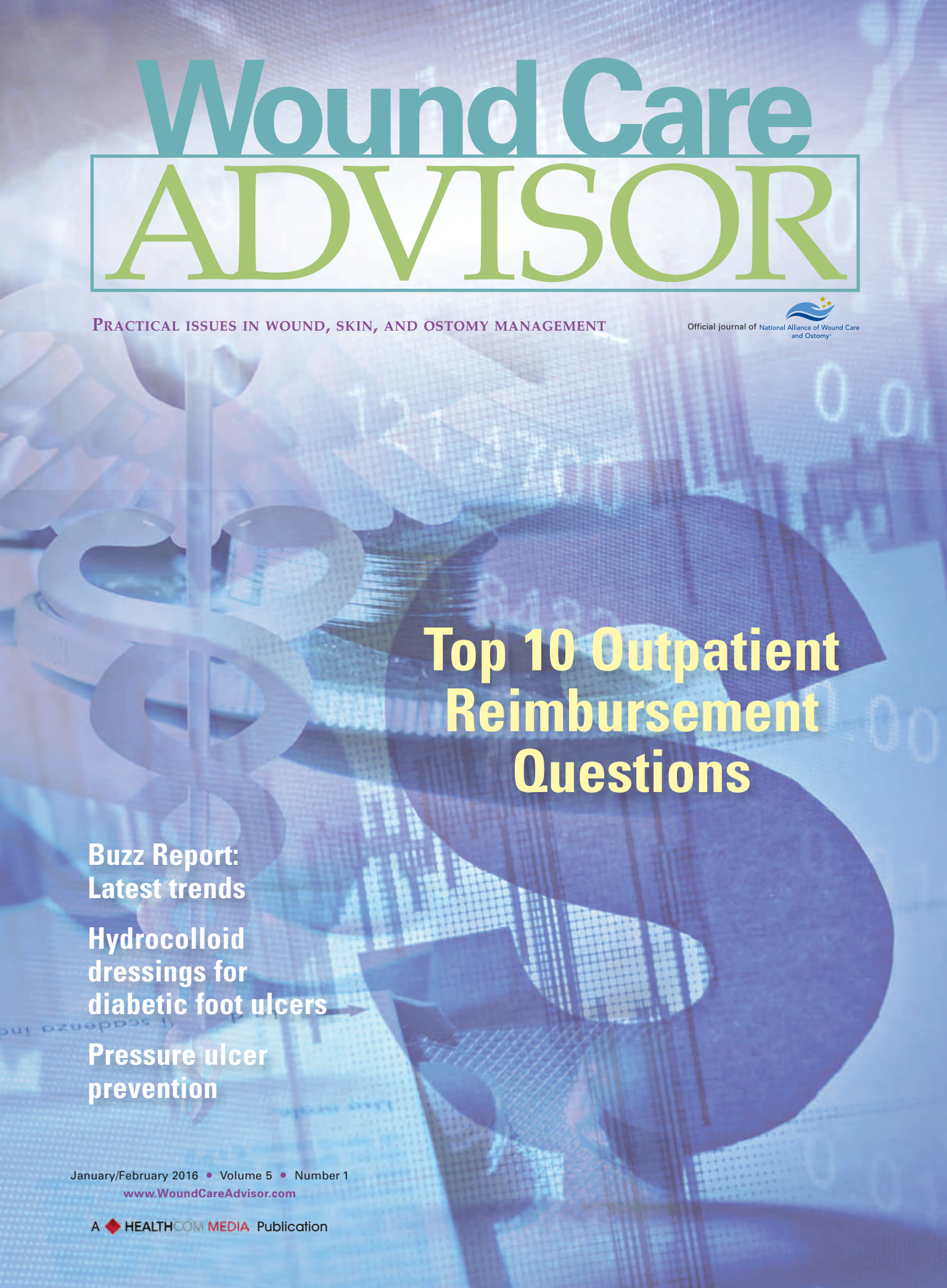
Wound Care ADVISOR

PRACTICAL ISSUES IN WOUND, SKIN, AND OSTOMY MANAGEMENT

Official journal of National Alliance of Wound Care and Ostomy®



Top 10 Outpatient Reimbursement Questions

Buzz Report: Latest trends

Hydrocolloid dressings for diabetic foot ulcers

Pressure ulcer prevention

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1. Ochs RF, Horn SD, et al. Comparison of Air-Fluidized Therapy with Other Support Surfaces Used to Treat Pressure Ulcers in Nursing Home Residents. Ostomy Wound Management, 2005, 51(2):38-68.

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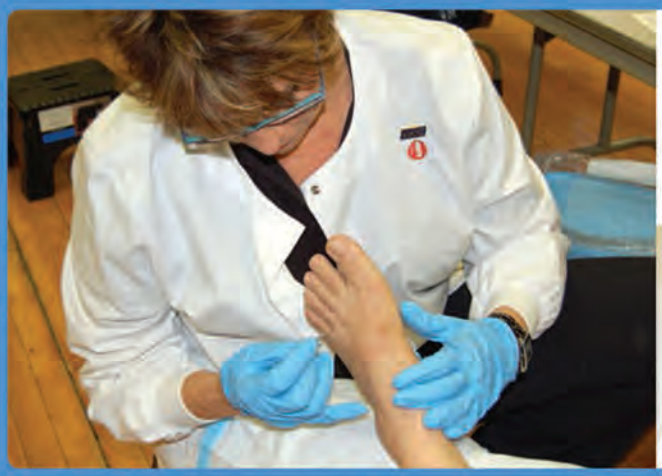

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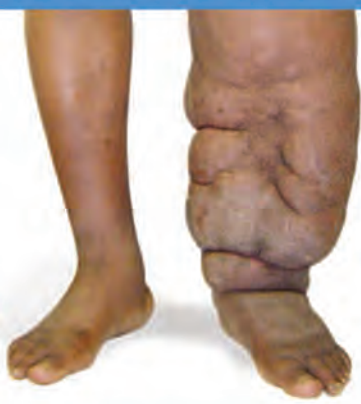

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Wound Care Advisor is written by skin and wound care experts and presented in a reader-friendly electronic format. Clinical content is peer reviewed.

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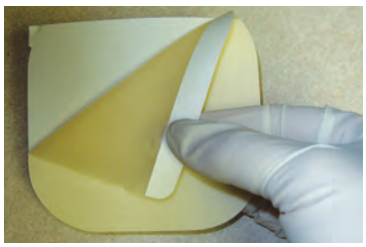

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*As demonstrated in an *in vivo* model

REFERENCE: 1. Thomason H, 2013. In vivo testing report describing the efficacy of DebriMitt™ to reduce bacterial load of *Pseudomonas aeruginosa* biofilm infected mouse wounds. The University of Manchester, Faculty of Life Sciences. Data on file, Crawford Healthcare. **2.** Wilkinson H, McBain A, Stephenson C, Hardman M. Comparing the effectiveness of polymer debriding devices using a porcine wound biofilm model. CHC-R391. Data on File. Crawford Healthcare Ltd.

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From the EDITOR

Don't go it alone

A fundamental rule of wound care is to treat the "whole" patient, not just the "hole" in the patient. To do this, we need to focus on a holistic approach to healing, which means evaluating everything that's going on with the patient—from nutrition, underlying diseases, and medications to activity level, social interactions, and even sleep patterns.

We know that as specialists, we're expected to do all of these things. But in the real world, we can't be specialists in all areas. That's where the team concept comes in. In fact, the team approach is imperative for helping us heal our patients' wounds and achieve our overall goal of improving patient outcomes.

Many **studies** show greater efficiency and improved clinical outcomes in facilities that have interdisciplinary wound care teams. In the traditional interdisciplinary care-team model, members of various disciplines meet together weekly or monthly to review each patient's care plan and make adjustments as needed. Some teams conduct wound rounds together and meet with the patient at the bedside; others may go beyond individual patient reviews to working on facility or agency prevention and treatment programs. The sky's the limit when it comes to what multidisciplinary teams can accomplish.

However, when asked, many wound care clinicians say they feel they're not part of a team. "I am the team," some state. "We have too many meetings and committees already" or "In my care setting, we work independently, with no access to other clinicians." In these situations, veering from the traditional care-team model might work better.

Today, a wound care team doesn't have to be facility based. It can stretch out across the entire continuum of care. In this electronic era, we have many new tools to help us go beyond traditional methods—email, texting, smartphones, Skype™, and FaceTime®, to name just a few. Clinicians can start a network with other clinicians or even other wound teams.

Whatever it takes, whichever tools you need, don't try to go it alone. Read "**It takes a village: Leading a wound team (http://woundcareadvisor.com/wp-content/uploads/2014/03/BP_Team_M-A14.pdf)**" to learn more about being a good team leader. And whether you're a team leader or team member, keep this mantra in mind: T.E.A.M. = Together Everyone Achieves More.

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Buzz Report: Latest trends, Part 1

By Donna Sardina, RN, MHA, WCC, CWCMS, DWC, OMS

Highlights of the latest trends in wound care from the past year

We all lead busy lives, with demanding work schedules and home responsibilities that can thwart our best intentions. Although we know it's our responsibility to stay abreast of changes in our field, we may feel overwhelmed when we try to make that happen.

Keeping clinicians up-to-date on clinical knowledge is one of the main goals of the Wild On Wounds (WOW) conference, held each September in Las Vegas. Each year, I present the opening session of this conference, called "The Buzz Report," which focuses on the latest-breaking wound care news—what's new, what's now, what's coming up. I discuss innovative new products, practice guidelines, resources, and tools from the last 12 months in skin, wound, and ostomy management. This article highlights the hottest topics from my 2015 Buzz Report.

Guidelines buzz

Although not new in 2015, "**Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline**[A]" from the National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel, and Pan Pacific Pressure Injury Alliance is still a buzzing topic. The guideline was released in September 2014, and many facilities and clinicians are still busy trying to incorporate it into their protocols. This can be an arduous task, given the more than 575 specific recommendations. However, the quick-pick system using "thumbs up" and "thumbs down" icons next to each recommendation helps users separate the *should do's* from the *don't do's*.

The American College of Physicians released two pressure ulcer guidelines in March 2015. "**Treatment of Pressure Ulcers: A Clinical Practice Guideline**[B]" and "**Risk Assessment and Prevention of Pressure Ulcers**[C]" are based on a systematic evidence review and focus on specific aspects of care. Each guideline has just three recommendations.

Although not a guideline per say, the evidence-based consensus document "**The Management of Diabetic Foot Ulcers (DFUs) Through Optimal Off-loading**[D]" published in the *Journal of the American Podiatric Medical Association* includes eight specific consensus statements. Here are two of the most notable:

- *Consensus statement #4:* Total contact casting is the preferred method for off-loading plantar DFUs, as it has most consistently demonstrated the best healing outcomes and is a cost-effective treatment.
- *Consensus statement #5:* There currently exists a gap between the evidence sup-

porting the efficacy of DFU off-loading and what is performed in clinical practice.

Literature buzz

Thousands of wound and ostomy articles are published each year. Below are just a few of the articles that I believe will have a significant impact at the bedside.

"**What is the healing time of Stage II pressure ulcers? Findings from a secondary analysis**[E]," in *Advances in Skin & Wound Care Journal*, describes data collected from a multicenter randomized clinical trial. The authors conclude that achieving complete re-epithelialization in stage 2 pressure ulcers takes approximately 23 days and that on average, small ulcers heal 12 days faster than those with a surface of 3.1 cm^2 or greater.

NPUAP released two key papers in 2015.

- "**Hand check method: Is it an effective method to monitor for bottoming out?**[F]" reviewed the science behind the clinical practice of hand checks for bottoming out on a support surface. NPUAP's position statement supports use of hand checks with air mattress overlays and chair cushions only. NPUAP stated more research is needed to develop acceptable ways to evaluate the performance of mattress replacements and integrated bed systems; until such time, clinicians should follow the manufacturer's recommendation and not perform hand checks.
- The white paper "**Do lift slings significantly change the efficacy of therapeutic support surfaces?**[G]" is designed to increase clinicians' critical thinking when using lift slings in combination with therapeutic support surfaces. NPUAP recommends clinicians choose a combination of support surface and sling that meets the patient's needs while focusing on the risks and benefits of leaving a sling beneath a patient.

A 2015 review and analysis of literature on friction and pressure ulcers in the *Journal of Wound Ostomy Continence Nursing* explained that friction alone doesn't directly cause pressure ulcers, and cautioned against categorizing friction wounds as pressure ulcers. "**Friction-induced skin injuries—are they pressure ulcers? An updated NPUAP white paper**[H]" explains that friction can result in shear forces that may lead to a pressure ulcer; however, without shear, friction alone doesn't lead to pressure ulcers.

Ulcers from sickle cell disease

About 1% to 3% of the U.S. population lives with sickle cell disease (SCD). From 25% to 75% of these people also experience leg ulcers. "**Sickle cell disease & wound care: Lower extremity ulcers in 'crisis,'**[I]" published in *Today's Wound Clinic*, identified key diagnostic characteristics and treatment protocols to consider. The underlying cause of SCD ulcers remains unknown. Most begin spontaneously or from trauma as small scabbed areas over the medial or lateral malleoli. Scabs progress to round, punched-out lesions with raised margins, deep bases, and necrotic slough, with surrounding brown hyperpigmentation and scaling. Patients typically complain of extreme tenderness or pain at the ulcer site.

Treatment aims to manage SCD and associated anemia and control pain. Local wound care involves moist wound healing, bacteria control, protection from trauma, loose-fitting clothing around the ankles to avoid friction, and pressure dressings, such as an Unna's boot. In many cases, sharp debridement can't be done because of intolerable pain. A good alternative is biological debridement.

Infrared skin thermometry

All objects at temperatures above absolute zero release infrared radiation. Heat from wound inflammation, fever, and infection is a form of infrared radiation. By using a noncontact infrared thermometer to moni-

tor wounds and surrounding tissue, clinicians can identify signs of deep inflammation, infection, or trauma that may be invisible on the surface. "**Infrared skin thermometry: An underutilized cost-effective tool for routine wound care practice and patient high-risk diabetic foot self-monitoring**[J]," published in *Advances in Wound Care*, found wounds with an elevated temperature measured with infrared thermometry were eight times more likely to be diagnosed with deep infection. A temperature elevation over the same spot on the other foot in a patient with diabetes without a foot ulcer may indicate an acute Charcot foot. In addition, limb ischemia results in lower regional, local, and side-to-side variability in temperatures. Using an infrared thermometer, clinicians can identify unequal vascular supply by measuring temperatures proximal and distal to the wound. Commercially available, inexpensive, noncontact infrared thermometers can detect localized increases in skin surface temperature comparable to scientific grade instruments.

Noncontact infrared thermometry also can be used to assess the skin for pressure ulcers, such as deep-tissue injury, dark skin tones, and circulatory status around the wound. I believe all wound care practitioners should have a noncontact infrared skin thermometer on their tool belt. For examples of these thermometers, visit **http://goo.gl/6wN5eJ**.

Product buzz

Debrisoft[®K] is a ground-breaking active debridement system from Lohmann & Rauscher that mechanically debrides and cleans wounds by rapidly removing debris, necrotic material, slough, exudate, and hyperkeratotic tissue. The dressing is made of soft, angled polyester fibers that loosen debris while protecting intact granulation tissue and epithelial cells.

To use, moisten with tap water or saline solution. Then, using light pressure and a circular motion, gently rub the wound or skin with the soft, fleecy side of the dressing. You can use Debrisoft each time you change the wound dressing.

A similar product, **DebriMitt**[™L] from Crawford Healthcare, is designed as a single-use mitt with a finger pouch. It gently removes nonviable tissue, hyperkeratotic skin, and debris and can disrupt biofilms in the wound base.

A natural approach to wound debridement can be achieved with the new **Bio-Monde BioBag**[®M], which contains disinfected larvae of *Lucilia sericata* (maggots) in a sealed sterile polyester net bag. The

New bedding fabrics

The 2014 clinical practice guideline from the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, and Pan Pacific Pressure Injury Alliance recommends that clinicians consider using silk-like fabrics rather than cotton or cotton-blend fabrics to reduce shear and friction. **DermaTherapy**[®O], a new development in fabric science, is the first and only therapeutic bedding on the market that incorporates uniquely structured synthetic fibers and yarns, offering an alternative to cotton and polyester for patients in healthcare facilities.

DermaTherapy helps control the microclimate—moisture, friction, and shear—between the skin and the support surface. Uniquely structured fibers create thin channels that wick moisture away from the skin. These rapid moisture wicking and evaporation properties keep users drier and cooler. This process helps remove heat from the body and reduce perspiration, which in turn helps maintain the body's water balance to control skin temperature and moisture more effectively.

DermaTherapy fabrics are extremely smooth, minimizing friction with skin, and are treated with a durable antimicrobial agent that reduces bioburden, bacteria, and odors. The products are available as bed linens, underpads, and hospital gowns, all of which can be used to help manage pressure ulcers, atopic dermatitis, and eczema, as well as aid in menopause care by relieving the discomfort of night sweats.

bag is placed directly onto the wound bed; larvae remain sealed within the dressing for the full 4-day treatment. The BioBag allows larvae to pass secretions through the pores of the polyester containment net, dissolving and physically removing devitalized tissue and bacteria from the wound without removing healthy and viable tissue. All wound-cleaning benefits of larval therapy remain in the BioBag without fear of larvae wandering from the treatment area.

Helix3 CM™ and **Helix3 CP™ [N]** are new collagen wound dressings from Amerx. Helix3 CM is a bioactive collagen matrix dressing composed of 100% type 1 bovine native collagen formulated in a highly absorptive porous collagen sheet. Helix3 CP is 100% type 1 bovine nonhydrolyzed collagen powder. Because these products aren't hydrolyzed, they contain 10 times more nondenatured, native triple-helix structured collagen than similar products.

For the latest bedding fabrics that reduce shear and friction, see *New bedding fabrics*.

Note: Watch for part 2 of the Buzz Report in the March-April issue.

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Online Resources

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C. annals.org/article.aspx?articleid=2173505

D. japmaonline.org/doi/abs/10.7547/8750-7315-104.6.555

E. ncbi.nlm.nih.gov/pubmed/25608012

F. npuap.org/wp-content/uploads/2012/01/Hand-Check-Position-Statement-June-2015.pdf

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H. ncbi.nlm.nih.gov/pubmed/25549310

I. http://goo.gl/8282T8

J. ncbi.nlm.nih.gov/pubmed/25502975

K. lohmann-rauscher.us/us/products/wound-care/debridement/debrisoft.html

L. us.crawfordhealthcare.com/woundcare/debrimitt

M. www.biomonde.com

N. amerxhc.com/wound-care/helix

O. therapeuticbedding.com/more_woundcare

Donna Sardina is editor-in-chief of *Wound Care Advisor* and cofounder of the Wound Care Education Institute in Plainfield, Illinois.

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- ***Business Consult*, which is designed to help wound care specialists manage their careers and stay current in relevant healthcare issues that affect skin and wound care.**

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Value of systematic reviews and meta-analyses in wound care

"**Systematic reviews and meta-analyses—literature-based recommendations for evaluating strengths, weaknesses, and clinical value**[A]," in *Ostomy Wound Management*, discusses evidence-based practice and how systematic reviews (SRs) and meta-analyses (MAs) can help improve management of wound care patients.

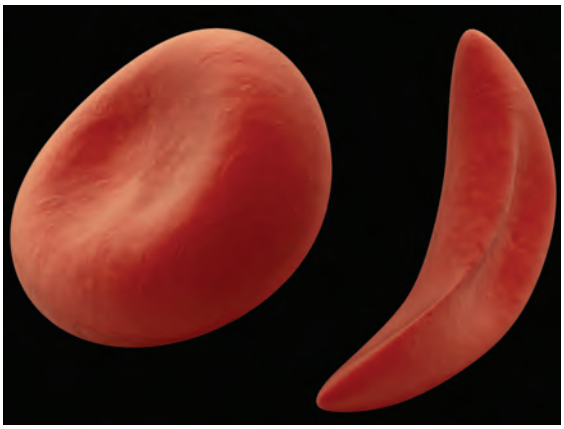
The authors of the article explain evidence-based practice and provide useful definitions for key terms. They then provide a list of eight questions to use when evaluating SRs and practical tips such as how to search for SR and MA studies. The article finishes with a list of eight interventions supported by the most evidence: hydrocolloidal dressings, honey, biosynthetic dressings, iodine complexes, silver compounds, hydrogels, foam dressings, and negative pressure wound therapy.

Inflammatory markers and diabetic foot osteomyelitis

Procalcitonin (PCT) is higher in patients with osteomyelitis than those without, according to a study of 35 patients with infected foot ulcers published in *International Wound Journal*.

The authors of "**The value of inflammatory markers to diagnose and monitor diabetic foot osteomyelitis**[B]" also measured erythrocyte

sedimentation rate (ESR), C-reactive protein (CRP), interleukin-6 (IL-6), interleukin-8 (IL-8), and monocyte chemotactic protein-1 (MCP-1) at baseline and after 3 and 6 weeks of standard therapy. They found that CRP, ESR, PCT, and IL-6 levels decreased significantly in patients with osteomyelitis after starting therapy, while MCP-1 increased. These findings indicate the markers might be helpful in monitoring response to therapy.



Proposed treatment algorithm for patients with sickle cell disease and leg ulcers

The authors of "**A treatment algorithm to identify therapeutic approaches for leg ulcers in patients with sickle cell disease**[C]," published in *International Wound Journal*, note that sickle cell ulcers, a common complication of sickle cell disease, are slow to heal and often recur. The article

reviews treatment options and presents a proposed treatment algorithm.

Mechanism of action for maggot therapy

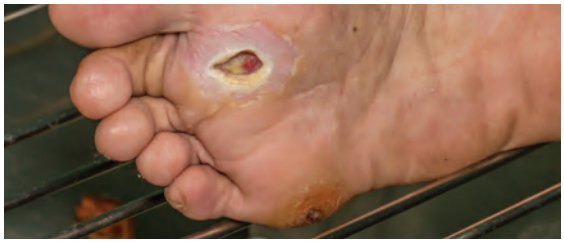
Maggot debridement therapy can promote healing in patients with diabetic foot wounds, according to "**Maggot debridement therapy promotes diabetic foot wound healing by up-regulating endothelial cell activity**[D]."

The authors of the study, published in *Journal of Diabetes and Its Complications*, report that maggot excretions/secretions promote healing by "up-regulating endothelial cell activity." In vitro, maggot excretions/secretions increased human umbilical vein endothelial cell proliferation, improved tube formation, and increased expression of vascular endothelial growth factor receptor 2 in a dose-dependent manner. CD34 and CD68 levels were increased in treated wounds.

People with diabetes and PAD at greater risk for impaired mobility

"**Diabetes is associated with increased risks of low lean mass and slow gait speed when peripheral artery disease is present**[E]," published in *Journal of Diabetes and Its Complications*, notes that low lean mass and mobility impairment were not seen in people who had either diabetes or peripheral artery disease (PAD) alone, only when both were present.

The study included 4,769 participants 40 years or older from the National Health and Nutrition Examination Survey 1999–2004.



Systematic review of diabetic foot offloading

"**Treatment of the diabetic foot by offloading: a systematic review**[F]" reports that total contact casts are the "most effective" devices for ulcer healing. However, the authors of the study in *Journal of Wound Care* note that contact casts "are not without complications and their impact on cost, compliance, and quality of life is not well understood." The review included 15 studies.

Fleet enema may be sufficient prep for DLI surgery

A fleet enema alone may be sufficient for preoperative bowel prep in patients undergoing anterior resections followed by a diverting loop ileostomy (DLI), according to

"**Colonic transit: what is the impact of a diverting loop ileostomy?**[G]"

The study in *ANZ Journal of Surgery* included 10 patients with a mean age of 57 years who were undergoing low anterior resection or ultra-low anterior resection for treatment of rectal cancer.

CDP with surgery treatment option for lower-extremity lymphedema

The combination of complex decongestive physical therapy (CDP) perioperatively and reduction surgery is an option for some patients with elephantiastic lymphedema of the lower extremity, according to a study in *Obesity Surgery*.

"**An integrative therapeutic concept for surgical treatment of severe cases of lymphedema of the lower extremity**[H]" included 26 patients who underwent CDP and surgery and 30 patients who received medial thigh lift due to post-bariatric or aesthetic issues. ■

Online Resources

A. http://www.o-wm.com/article/systematic-reviews-and-meta-analyses-literature-based-recommendations-evaluating-strengths

B. http://onlinelibrary.wiley.com/doi/10.1111/iwj.12545/abstract

C. http://onlinelibrary.wiley.com/doi/10.1111/iwj.12522/abstract

D. http://www.jdcjournal.com/article/S1056-8727%2815%2900447-X/abstract

E. http://www.jdcjournal.com/article/S1056-8727%2815%2900453-5/abstract

F. http://www.magonlinelibrary.com/doi/abs/10.12968/jowc.2015.24.12.560

G. http://onlinelibrary.wiley.com/doi/10.1111/ans.13376/abstract?userIsAuthenticated=false&deniedAccessCustomisedMessage=

H. http://link.springer.com/article/10.1007/s11695-015-1982-2

Pros and cons of hydrocolloid dressings for diabetic foot ulcers

These occlusive dressings promote a moist healing environment but may increase infection risk.

By Kristine Hoffman, DPM, FACFAS

Diabetic foot ulcers stem from multiple factors, including peripheral neuropathy, high plantar pressures, decreased vascularity, and impaired wound healing. Contributing significantly to morbidity, they may cause limb loss and death. (See *Foot ulcers and diabetes*.)

Initially, hydrocolloid dressings were developed to function as part of the stomal flange. Based on their success in protecting peristomal skin, they were introduced gradually into other areas of wound care. They contain wafers of gel-forming polymers, such as gelatin, pectin, and cellulose agents, within a flexible water-resistant outer layer. The wafers absorb wound exudate, forming a gel and creating a moist healing environment.

The wide range of hydrocolloid dressings available include fibrous and matrix dressings. Commercially available products include DuoDerm®, Granuflex®, Comfeel®, Cutimed® Hydro, and CovaWound™.

View: hydrocolloid dressings[A]

Benefits

Hydrocolloid dressings are occlusive, retaining wound exudate and promoting the moist environment that's optimal for wound healing. They also promote autolytic wound debridement, removing

necrotic tissue—a barrier to wound healing—from the wound bed. Wet or moist wound environments promote re-epithelialization, reduce inflammatory reactions, and decrease scar formation. Hydrocolloid dressings also aid wound healing by retaining growth factors in the exudate, promoting granulation tissue formation and epithelialization.

Although these dressings are contraindicated for patients with infected ulcers, they're useful in preventing wound infection, serving as a barrier that prevents bacterial entry into diabetic foot ulcers. In addition, they promote a low pH, which reduces or even eradicates certain bacteria (namely *Pseudomonas aeruginosa*) from the wound bed.

Hydrocolloid dressings are self-adherent and easy to apply. The second most popular dressing for diabetic foot ulcers, they can be left intact up to 7 days, depending

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Foot ulcers and diabetes

Patients with diabetes have a 15% to 20% lifetime risk of developing foot ulcers. More than 15% of these ulcers necessitate limb amputation. Diabetes is the leading cause of nontraumatic lower extremity amputations, with most amputations preceded by nonhealing ulcers.

Treatment of diabetic foot ulcers requires a multidisciplinary team approach, including endocrinologists, vascular surgeons, infectious disease specialists, wound care clinicians, and podiatrists. This approach has been shown to improve clinical outcomes and reduce the need for lower extremity amputation.

on the amount of wound exudate. The need for less frequent dressing changes can reduce disruption of healing, improve patient compliance, and decrease cost.

Disadvantages

Controversy exists over the use of hydrocolloid dressings for treating diabetic foot ulcers. Many wound care experts suspect they may increase the infection risk because they retain bacteria and purulent wound exudate, create a hypoxic wound environment, and lead to less frequent wound monitoring. Given these concerns, hydrocolloid dressings are contraindicated for infected wounds.

Use these dressing with care in diabetic patients. Make sure to obtain bacterial cultures before starting treatment, and change the dressing more often than in patients without diabetes.

Also, because they're occlusive, hydrocolloid dressings may lead to an overly moist wound environment, with excess moisture causing dressing separation and periwound maceration. Experts recommend using them only for wounds with low to moderate amounts of wound exudate.

In addition, the hypoxic environment created by these dressings may delay and impede wound healing and raise the infection risk. Leukocytes phagocytize bacteria but can't kill them in hypoxic environments because of the low oxygen tension; this significantly increases infection risk. Collagen maturation, endothelium development, keratinocyte migration, and granulation tissue formation depend on oxygen and may be inhibited by hypoxic wound bed conditions. (See *Patient compliance factors.*)

Patient compliance factors

Patient compliance may be a problem with hydrocolloid dressings. Chronic wounds commonly have an offensive odor, which hydrocolloid and other occlusive dressings may worsen by trapping and containing malodorous exudate and odor molecules. However, cyclodextrin, an oligosaccharide that absorbs adventitious odors, has been added to hydrocolloid products to provide fluid and odor absorbency.

Patients also may have concerns about cost. Hydrocolloid dressings are significantly more expensive than traditional wound dressings, such as wet-to-dry gauze. On the other hand, they require fewer dressing changes, fewer supplies, and less professional time. Also, they cost about the same as advanced wound healing modalities, such as negative pressure wound therapy.

More research needed

Although many studies show hydrocolloid dressings are effective in treating diabetic foot ulcers, a 2012 systematic review by Dumville et al. found no evidence that they're more effective than basic wound contact dressings. Also, according to a 2013 review of randomized controlled trials, hydrocolloid dressings aren't more effective than basic wound contact dressings, foam dressings, alginate dressings, and topical treatments in managing diabetic foot ulcers. However, these studies produced sparse data and included research with risk of bias.

Consequently, proper patient selection is crucial. We need further research to evaluate the safety and effectiveness of hydrocolloid dressings for diabetic foot ulcers and to establish further guidelines for their use. ■

Kristine Hoffman practices podiatry at the Boulder Valley Foot and Ankle Clinic in Boulder, Colorado.

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Online Resource

A. https://www.youtube.com/watch?v=xh3I4eM5rZY

Apple BITES

Dose from WCEI

WOUND CARE EDUCATION INSTITUTE®

Medications and wound healing

By Nancy Morgan, RN, BSN, MBA, WOC, WCC, DWC, OMS

Each issue, *Apple Bites* brings you a tool you can apply in your daily practice. Here are examples of medications that can affect wound healing.

Assessment and care planning for wound healing should include a thorough review of the individual's current medications to identify those that may affect healing outcomes. Clinicians must then weigh the risks and benefits of continuing or discontinuing the medications. In some cases, the risk of discontinuing the medication outweighs the importance of wound healing, so the goal of the care plan should be adjusted to "maintain a wound" instead of "healing." ■

Nancy Morgan is cofounder of Wound Care Education Institute in Plainfield, Illinois.

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Medication	Effects on wound healing
Corticosteroids Examples: cortisone, hydrocortisone, and prednisone	• Inhibition of epithelial proliferation • Impairment of inflammatory response • Incomplete granulation tissue • Reduced wound contraction • Possible increased risk of wound infection
High doses of nonsteroidal anti-inflammatory drugs (NSAIDs) Examples: ibuprofen, celecoxib	• Decreased tensile strength of wound • Reduced wound contraction • Delayed epithelialization
Antiplatelets Examples: aspirin, clopidogrel	• Decreased platelet adhesion and activation • Inhibition of inflammation phase of healing • Inhibition of epithelial proliferation of keratinocytes
Anticoagulants Example: heparin	• Inhibition of cross linking of collagen and acceleration of its degradation
Vasoconstrictors Examples: nicotine, cocaine, adrenaline (epinephrine), and ergotamine	• Tissue hypoxia by reducing microcirculation
Antineoplastic agents Example: chemotherapy medications	• Delay of cell migration into wound • Lower collagen production • Impaired proliferation of fibroblasts • Inhibition of contraction of wounds • Possible increased risk of wound infection

Empowering patients to play an active role in pressure ulcer prevention

By Hannah Miller, MSN, RN

Developing a pressure ulcer can cause the patient pain, lead to social isolation, result in reduced mobility, and can even be fatal. According to the Agency for Healthcare Research and Quality, estimated costs for each pressure ulcer range from $37,800 to $70,000, and the total annual cost of pressure ulcers in the United States is an estimated $11 billion.

Nurses understand their role in preventing pressure ulcers, but what role do patients play in the prevention plan? Nurses need to empower the patient to be an active member in health promotion activities and participate in prevention measures. In this article, I highlight the importance of incorporating pressure ulcer prevention into patient education for high-risk patients as a way to empower patients. Empowered patients can help improve outcomes and reduce overall costs of this hospital-acquired complication.

Patient engagement

A basic element of empowerment is engagement. Nurses must practice a patient-centered approach to healthcare delivery that embraces and supports the belief that patients are, or can become, competent to make informed decisions. Engaged patients tend to function better, experience fewer symptoms, and are less likely to experience an adverse event compared to those who aren't engaged.

As a practicing nurse, you would think that engaging patients in their care would lie at the core of the culture of our healthcare system; unfortunately, that is not always the case. For example, sometimes we forget to explain to patients *why* we are asking them to perform health promotion activities. If we instruct patients to follow a direction without explaining the meaning behind it, they may be less likely to actively participate in the activities.

Helping patients understand the reason behind an activity, instead of making it seem like we are ordering them to do it, can help performance and adherence levels. With our expertise and close proximity to patients, we are able to take a leading role in engaging them in their care.

The value of teach-back

High-risk patients must be informed about pressure ulcers, including prevention and complications. Arming patients with knowledge makes them feel empowered to actively participate in their health promotion. Unfortunately, studies reported by Dewalt and colleagues note that 40% to 80% of in-

More about teach-back

The conversation below illustrates how discussion as part of teach-back can reinforce a patient's understanding of pressure ulcer prevention.

Nurse: "There are several factors that may lead to pressure ulcers. Those risk factors include: eating the wrong kinds of food, not being able to move around much, other medical problems like diabetes, not being able to feel much when you touch something, and not being able to control your urination, which can make your skin wet."

Patient: "Okay, I get it."

Nurse: "To be sure you have a good understanding of the factors that may lead to pressure ulcers, could you teach back to me three of those risk factors we just talked about?"

Patient: "Sure. Three risk factors would be not eating right, not moving around enough, and my diabetes."

Nurse: "Thank you very much, it sounds like you have a great understanding. What questions can I answer for you?" (Note: This is better than simply asking, "Do you have any questions?" because people tend to just say no.)

Here are more resources for teach-back:

- **Always use teach-back!**[A] This toolkit includes an interactive teach-back learning module.
- **The teach-back method.**[B] Here you can find tips, a PowerPoint presentation, and a **video on health literacy**[C], an important consideration when teaching patients.

formation taught to patients is forgotten immediately. The teach-back method is one way to reduce those percentages.

In the teach-back method, patients teach the information taught to them back to the nurse. This can be done through discussion or demonstration, depending on the topic. (See *More about teach-back*.) When information is correctly taught back, it confirms that the patient understands the content. Using the teach-back method in combination with daily reinforcement from nursing staff can help to solidify the knowledge learned and encourage implementation of health practices.

Integrating into care

Latimer, Chaboyer, and Gillespie reported that after conducting interviews regarding pressure ulcer education, patients had varying knowledge of pressure injuries and only a few reported receiving education from healthcare providers about risk factors and strategies to prevent pressure ulcers.

To ensure pressure ulcer prevention education occurs when needed, it's helpful for this education to be part of the standard of care for high-risk patients. Making these education sessions mandatory and using the teach-back method to confirm understanding can help patient adherence to suggested prevention interventions. As nurses, we are empowering our patients by effectively supplying them with information they need to make good choices and be active in promoting their health.

Clinicians should document that education was provided and its level of effectiveness. Evidence of effectiveness includes patient involvement in prevention measures, such as actively turning themselves. Proper documentation by nursing staff shows the effect of education on patients' participation in their own health promotion activities. Although education may take time, the time spent outweighs

the complications of this debilitating condition. After all, it is far easier to prevent a complication than it is to treat one and regain a patient's health.

Promoting engagement

A pressure ulcer often results in patient pain and suffering, poor patient outcomes, decreased quality of life, and increased costs for both patients and their providers. The integration of pressure ulcer prevention into required patient education using the teach-back method empowers and engages patients, fostering their active participation in their own health promotion. Healthcare providers and patients can work together as a team to prevent the many costs of pressure ulcers.

Hannah Miller is a clinical learning lab specialist at Chamberlain College of Nursing in Cleveland, Ohio.

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Online Resources

A. http://www.teachbacktraining.org/

B. http://www.nchealthliteracy.org/toolkit/tool5.pdf

C. https://www.youtube.com/watch?v=cGtTZ_vxjyA

CASE STUDY: Peristomal pyoderma gangrenosum

By Susan Lee, BSN, RN, WCC

As a wound care specialist, you have learned about many skin conditions, some so unusual and rare that you probably thought you would never observe them. I've been a nurse for 38 years, with the last 10 years in wound care, and that's certainly what I thought. But I was wrong. Let me tell you about my challenging patient with an unusual skin condition.

A perplexing patient

Mrs. Thompson*, a 77-year-old resident in a long-term care facility where I work, had diabetes, peripheral vascular disease, and a history of a cerebrovascular accident in 1993, which left her with left-sided paralysis.

In February 2010, Mrs. Thompson underwent a colostomy in her left lower abdominal quadrant as a result of a large sigmoid colon volvulus. She was doing well until November 2011, when peristomal skin breakdown began, presumably caused by leakage. Over the course of the next 18 months, her skin breakdown would often improve without any change in treatment, which made subsequent exacerbations frustrating.

Here are the appliance-related adaptations my colleagues and I tried with Mrs. Thompson:

- stoma powders and paste
- wafer adaptations
- plain and medical-grade honey hydrocolloid applied directly to peristomal lesions.

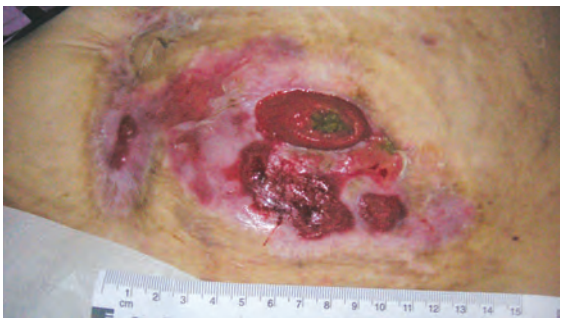
Unfortunately, none of these efforts solved the problem. A March 2013 dermatology consult resulted in no definitive diagnosis or alternative treatment options.

My "Aha" moment came when a computer search for causes of periostomal breakdown revealed illustrations of various conditions. One image, labeled pyoderma gangrenosum (PG), resembled what was occurring with Mrs. Thompson.

About pyoderma gangrenosum

PG, a skin ulceration, was first described in 1930 by Brunsting and colleagues. It's associated with Crohn's or inflammatory bowel disease, cancer, blood dyscrasias, diabetes, and hepatitis.

PG has been described in several forms, but ulceration usually occurs on the abdomen, perineum, and lower extremities. The lesions begin as discrete pustules that erupt and coalesce into a classic painful ulcer with a violaceous border and undermined edge. Multiple lesions are common.



Mrs. Thompson's wound at the time of diagnosis

Diagnosis

The diagnosis of peristomal PG is based on the patient's history and characteristics of skin breakdown because biopsies and cultures can't confirm the diagnosis. The lesions are typically very painful, but Mrs. Thompson didn't experience pain because of the left-sided sensory deficits caused by her stroke. In one study, the time to onset of periostomal PG after creation of a stoma ranged from 2 months to 25 years; in Mrs. Thompson's case, onset was 20 months. The erratic progression of this rare disease is considered a hallmark of the disorder.

> Even though diagnosis of skin conditions can be difficult, it's important not to give up.

My colleagues and I validated the diagnosis of periostomal PG by characteristics of the lesions and exclusion of other skin conditions.

Management

The unknown etiology of the peristomal lesions makes treatment decisions challenging. Because the condition is rare, recent evidence-based practice data are limited, with most reported as part of research trials. When lesions are mild and there is absence of systemic disease, it may be possible to control the condition with topical corticosteroids and dressings.

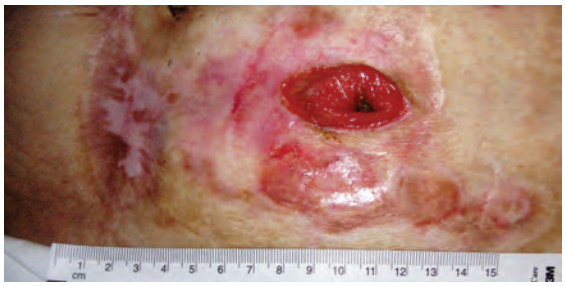
Based on what we could find in the literature and discussion with the geriatric nurse practitioner and Mrs. Thompson's primary care physician, we decided to start her on high-dose steroid cream.

Positive results

On April 4, 2013, Mrs. Thompson began receiving daily clobetasol propionate

0.05%, a high-dose steroid cream applied to the peristomal area. We gently rubbed in the cream completely, followed by an aerosol skin barrier and a one-piece appliance. The treatment was re-evaluated every 14 days, as recommended by the manufacturer, because of the risk for hyperglycemia, which did not occur.

By June 13, 2013, 72 days later, the lesions had healed and we resumed biweekly appliance changes.

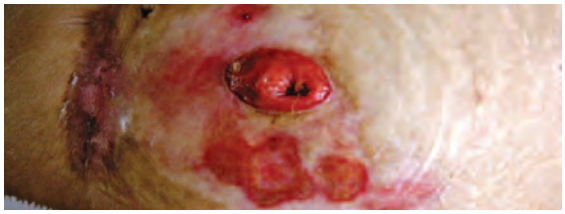


Lesions healed after 72 days of clobetasol propionate 0.05%.

This healing time of about 2.4 months was much faster than what we found in the literature: One study reported an average healing time for periostomal PG of 11.4 months (median, 7.5 months; range 1-41 months).

After the initial PG exacerbation was healed, Mrs. Thompson occasionally experienced minor exacerbations, but not to the extent it was when first diagnosed and treated with clobetasol.

One 60-g tube of clobetasol propionate 0.05% (cost of $328) was required to successfully treat the breakdown.



Complete wound healing at 120 days

Committed to healing

Comorbid conditions play an important role in effectively diagnosing and treating skin breakdown. In Mrs. Thompson's case, sensory deficits from a stroke sustained almost 20 years earlier diminished her ability to feel pain at the stoma site, which is the signature diagnostic characteristic of PG.

I learned that even though diagnosis of skin conditions can be difficult, it's important not to give up. My commitment, along with the commitment of my colleagues, resulted in our ability to find a solution for Mrs. Thompson's condition. ■

*Name is fictitious.

Susan Lee is a wound care provider for two long-term care facilities, Maluhia and Leahi Hospital in the Oahu Region of the Hawaii Health System Corporation in Honolulu, Hawaii.

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Restorative nursing programs help prevent pressure ulcers

By Jeri Lundgren, BSN, RN, PHN, CWS, CWCN

Immobility affects all our body systems, including our skin. According to the National Pressure Ulcer Advisory Panel, many contributing factors are associated with the formation of a pressure ulcer, with impaired mobility leading the list.

So what can clinicians do to prevent harm caused by immobility? One often-overlooked strategy is a restorative nursing program. (See *About restorative nursing*.)

About restorative nursing

Restorative nursing programs in long-term care incorporate interventions that promote a patient's ability to adapt and adjust to living safely and as independently as possible. It includes rehabilitation, management of behavioral symptoms, cognitive performance, and physical function. Examples of restorative programs include range of motion, splints, walking, transfer, communication skills, and range of motion.

Click here to watch a short video about restorative care.[A]

Moving up the time line

Most patients who score poorly for mobility and/or activity impairments on the Braden Scale for Predicting Pressure Ulcer Risk are referred to physical therapy, but too often a restorative nursing program isn't started until patients are ready to be discharged from therapy. However, the more active we can keep patients, the less likely they will have prolonged periods of time in the same position, thus preventing pressure ulcer formation. If your patients are spending most of their time sitting in wheelchairs and/or in their beds, consider tapping into a restorative nursing program, which should run parallel to therapy.

Benefits of restorative nursing

Implementing a restorative nursing program can significantly benefit your patients. For example, restorative nurses can promote early mobility by assessing patients' ability to turn and reposition themselves in bed, go from a lying to sitting position, and shift their weight in the wheelchair, including reverse push-ups.

Restorative nurses also can provide strength-training exercises as part of range-of-motion programs. These exercises can help patients develop the muscles they need for mobility and self-positioning. A strength-training program can be tailored to any position (supine, sitting, or standing) so it's individualized for the patient's needs. Many clinicians think patients who are of advanced age or deconditioned aren't eligible for strength-training programs, but studies show that these patients still benefit. Essentially it is never too late.

Connecting patients with a restorative nursing program

To start a restorative nursing program, first discuss its benefits with the patient and ensure he or she is willing to participate. Next, work with therapists to identify the appropriate exercises that restorative nurses and nursing aides will perform with the patient. Physician clearance is recommended.

Remember that the program can be enhanced with interactive activities such as obstacle courses, video games, gardening, dance classes, tai chi, and bowling to keep your patients mobile.

Be proactive

The more active and mobile your patients are—and the earlier they begin activity—the less likely they will develop a pressure ulcer. You might want to have a policy in your care setting that automatically triggers a restorative nursing program for residents who score poorly for mobility and/or activity on the Braden Scale. The program may be just what the patient needs to protect him or her from harm. ■

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Online Resource

A. https://www.youtube.com/watch?v=lCRRiEkUtOk

Top 10 outpatient reimbursement questions

By Kathleen D. Schaum, MS

At the 2015 Wild on Wounds conference, the interactive workshop "Are You Ready for an Outpatient Reimbursement Challenge?" featured a lively discussion among participants about 25 real-life reimbursement scenarios. Here are the top 10 questions the attendees asked, with the answers I provided.

Q Why is it necessary for qualified healthcare professionals (QHPs) such as physicians, podiatrists, nurse practitioners, physician assistants, and clinical nurse specialists to identify the place of service where they provide wound care services and to correctly state the place of service on their claim forms?

A In any given day, QHPs often perform wound care services for patients in various sites of care. For example, a physician may spend the first 4 hours of the day in the hospital-based outpatient wound care department (place of service

22), then see patients for 2 hours in the hospital (place of service 21), and finally see patients for 2 more hours in his or her private office (place of service 11). Because the Medicare Physician Fee Schedule pays more for services provided in a QHP's office than in facilities, the QHP must establish a process for informing billers exactly where each patient encounter occurred. Otherwise the billers may assume that all the encounters occurred in the QHP's office and will overbill the Medicare program.

Q Why is it important to know whether the outpatient wound clinic is a hospital-based outpatient wound care department (HOPD) or a QHP office called a wound clinic?

A When patients are seen by a QHP in an HOPD, the patients and Medicare receive two bills: one from the HOPD and one from the QHP. When patients are seen by a QHP in his or her office, the patients and Medicare only receive one bill. Patients should be informed whether they should expect one or two bills.

Q Why can't wound care and ostomy professionals working in HOPDs make decisions to change orders and send them to a QHP for signature after the work is performed?

A Emergency departments (EDs) and HOPDs are paid by the same Medicare payment system. Just as EDs require direct supervision, so do HOPDs. Therefore, a QHP must go to the HOPD, assess the patient's condition, and change the orders if the QHP deems the change is necessary. Then the wound care and ostomy professional may proceed with the work. It's important to remember that the Centers for Medicare & Medicaid Services (CMS) has reiterated that direct supervision cannot be provided via the phone.

Q When will CMS release National Coverage Determinations (NCDs) and when will the Medicare Administrative Contractors (MACs) who process claims release Local Coverage Determinations (LCDs) with ICD-10 codes?

A Both CMS and the MACs already released "future effective" NCDs and LCDs in the spring of 2015. The ICD-10 codes have been implemented, so these "future effective" NCDs and LCDs have been converted to "active" NCDs and LCDs. All wound care professionals should locate these updated documents on either the CMS Medicare Coverage Database or their MAC's website.

Q Why should all wound care professionals read the NCDs and LCDs that pertain to the wound care work they perform?

A NCDs and LCDs provide Medicare coverage rules that specify the following:

- coverage indications, limitations, and/or medical necessity
- covered/non-covered product codes, procedure codes, and modifiers
- covered diagnosis codes
- utilization guidelines
- documentation guidelines.

Wound care professionals must know these coverage rules. If a Medicare patient's medical condition aligns with the coverage rules, the service/product/procedure has a good chance of Medicare payment. If not, the wound care professional

should explain the coverage situation to the Medicare beneficiary and give the beneficiary the opportunity to receive and personally pay for the necessary care. That is achieved by the wound care professional providing the Medicare beneficiary with an Advance Beneficiary Notice of Noncoverage (ABN) and by the beneficiary signing the notice and agreeing to pay for the care.

Q How often should wound care professionals look for updates to LCDs?

A MACs may update LCDs as often as they deem necessary. Some LCDs were updated 5 or 6 times in 2014. Therefore, wound care professionals should assign someone to review LCDs on a monthly basis. When LCDs are revised, all wound care professionals should read them carefully.

Q Is it true that if an LCD is not written about a particular service, procedure, or product, Medicare does not cover it?

A No. If a MAC has not released an LCD, it means the MAC has not found a reason to control the utilization of the particular service, procedure, or product. In this case, coverage will be based on medical necessity as proven by the patient's diagnosis and the documentation in the medical record.

Q How can I find out if Medicare will pay for two different procedures performed during the same encounter?

A Simply read the National Correct Coding Initiative (NCCI) Edit Manual that is effective each January and refer to the NCCI electronic files that are updated on a quarterly basis in January, April, July, and October.

Q Is it true that CMS limits the number of units that may be reported on a claim for some procedures?

A Yes, that is partially true. CMS publishes a list of Medically Unlikely Edits (MUEs) that identifies the maximum number of units that may be submitted per date of service or per claim. PLEASE NOTE: CMS does not publish all of the edits for number of units allowed – some are known only to CMS and the MACs that process the claims. Nevertheless, wound care professionals can easily locate the published MUEs on the NCCI web page.

Q The coders insist that the number of units for the application of cellular and/or tissue-based products for wounds (CTPs) [outdated term "skin substitute"] and the number of units for the actual CTP should match exactly. Is that true?

A No. The number of units reported for the application of the CTPs should follow the description of the application code, which will either be for 25 or 100 sq cm increments of wound surface area. The number of units reported for the actual CTP depends on the number of sq cm that were opened for that application. For example: If 21 sq cm of a particular "low-cost" CTP were opened for an 18 sq cm wound on the leg, the HOPD claim to Medicare would be:

C5271	1 unit
QXXXX	21 units

BONUS Q:

I am a QHP and work in an HOPD. When I debride epidermis and/or dermis, I want to use the code 11042. My coders say that I should use the code 97597. I believe that is a code for physical therapists and not a code for QHPs. In addition, I do not like the Medicare allowable for 97597. Am I correct to use 11042?

BONUS Q:

No. The QHP should congratulate his or her coders because they are doing their best to provide correct coding rules. The 2015 CPT®* manual clearly describes 97597 as the code to use when only epidermis and/or dermis are debrided. It is true that CMS designated 97597 as a "sometimes therapy" code. That simply means that therapists who perform 97597 are required to attach a therapy modifier to the code on the claim from. If QHPs perform 97597, they simply bill the code on the claim form; no modifier is required. It's important to remember that wound care professionals should not select codes to report based on the reimbursement rates they like best.

If you wish to learn more about these and other reimbursement topics, you and your revenue cycle team may want to attend one of the twelve 2015 Wound Clinic Business seminars that will be offered in 2016; see **www.woundclinicbusiness.com**. ■

Kathleen D. Schaum is president and founder of Kathleen D. Schaum & Associates, Inc., in Lake Worth, Florida. Schaum can be reached for questions and consultations at 561-964-2470 or kathleendschaum@bellsouth.net.

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The power of the positive

The authors put positivity in action to build better teams and improve organizational performance.

By Paige Roberts, MBA, BSN, RN, PCCN, and Kaitlin Strauss, BSN, RN, PCCN

Being positive in a negative situation is not naïve. It's leadership.

— Ralph S. Marston, Jr., author and publisher of The Daily Motivator website

Clinicians may encounter many challenges and stressors in the workplace—long hours, rotating shifts, inadequate staffing, poor teamwork, and pressure to achieve higher performance levels in an emotionally and physically demanding field.

But hope exists. Positive psychology uses scientific understanding and interventions to help people achieve a more satisfactory life. Positive psychologists have shown that building positive emotions can change the way we approach and view our environment, helping us become healthier, happier, and more resilient and helping employees and teams become more productive and engaged.

Research on positive emotion over the last 15 years focuses on using positivity to build resources and resilience. A leading researcher in this area is Barbara Fredrickson, who developed the "broad-

en and build" theory. This theory describes how accumulating positive emotions broadens our minds and awareness, enabling us to develop new thoughts, activities, and relationships and to gain lasting personal resources that persist even after the emotion passes. We become better, more able versions of ourselves, in turn creating more positive emotions and an upward spiral of positivity. Leaders have a unique opportunity to apply this research to build positivity in their teams using simple interventions.

Overcoming negative tendencies

As humans, we're wired to focus on the negative. Our basic negative emotions evolved from our ancestors' fight-or-flight instinct—the physiologic response to a perceived threat to survival. While fight-or-flight is important in emergencies, too much exposure to long-term negative emotions can heighten our cardiovascular response and cause additional stress.

In clinicians, a negative tendency may be intensified because we're trained to look for the negative: skin breakdown, ostomy site problems, signs of wound infection. Fortunately, research shows that accumulating positive emotions enables us to overcome the effects of the negative and realize the power of the positive.

Positivity in action

Applying the "broaden and build" theory to teams can result in positive emotions that lead to a positive emotional climate, which stimulates organizational growth and performance. Positive emotions also can improve relationships among coworkers and cooperation within teams. Using positive psychology in healthcare settings is a relatively new concept but has endless potential for healthcare workers and the patients in our care.

Our unit has a blended acuity of patients and a high daily patient turnover rate—up to 50% in a day. We turned to positivity research to find ways to inspire staff to move past a survival state and motivate them to achieve new levels of resilience and satisfaction. We tailored seven evidence-based interventions to apply to building positivity in teams rather than just individuals.

Three good things

Writing down three good things each day for 2 weeks helps those good things become more visible, even during the most challenging situations. Researchers found that doing this every day for 2 weeks increased happiness for up to 6 months.

To adapt this practice to a clinical environment and a focus on teamwork, we developed a "three good things" sheet that gets passed around at the end of the shift. Every staff member writes down a good thing that happened that day, and the charge nurse presents three of these things to the oncoming-shift nurses to help them start their shift in a positive light. "Three good things" was an encouraged practice for 2 weeks, but staff continued to practice it consistently throughout the next year—and beyond.

Not just happiness and smiles

Being positive isn't all about happiness and smiles. It's about finding ways to increase the whole range of positive emotions. It helps us see good things even in the most challenging and chaotic times, and it provides tools that help us approach every encounter with another person as an opportunity to create a high-quality connection.

Increasing social connections

Social connections have been correlated with happiness and are considered necessary for people to flourish. It's important not only to increase the number of social connections, but also to make each connection a high-quality one. (See *Not just happiness and smiles*.)

To improve the quality of our connections with patients, we place "Getting to know you" boards in each patient room. On admission, the RN or nursing assistant explains to patients that this board is a place to share something about themselves, not their illness and hospitalization. They ask patients, "Is there anything you'd like to share?" Patients post information about their hobbies, families, jobs—things they may not otherwise share with us.

Encouraging random acts of kindness

Acts of kindness and altruism have been shown to improve mental health and reduce stress levels. We challenged staff to perform random acts of kindness over a 2-month period and report any acts performed, received, or witnessed. This practice spread throughout the hospital, with patients performing acts of kindness for other patients and ancillary staff and doctors getting in on the action. At the end of the 2 months, we celebrated at our staff meeting, where we showed a video of all of the acts of kindness. (Visit **www.youtube.com/watch?v=VV9Fzdqoy20** to watch the video.)

Other interventions

We've also worked on increasing gratitude through a staff peer recognition board, increasing our awareness of the positivity in our lives through a "loving kindness meditation" at a staff meeting, and using the Signature Strengths survey (available at **www.viame.org**) to discover each other's strengths. Engaging in enjoyable activities, such as getting dinner together after a long shift or going out as a group to a baseball game, also has been shown to increase positive emotions and happiness.

Just do it!

Any positive emotion can start the upward spiral, so the most important thing you can do to increase positivity in your team is to get started. Pick the intervention that most appeals to you, adapt it to your environment, and commit to implementing it within the next week. Keep at it—and watch the upward spiral of positive emotions grow. ■

The authors are Clinical Nurse IVs at UNC Hospitals in Chapel Hill, North Carolina.

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Clinician RESOURCES

Start the New Year off right by checking out these resources.

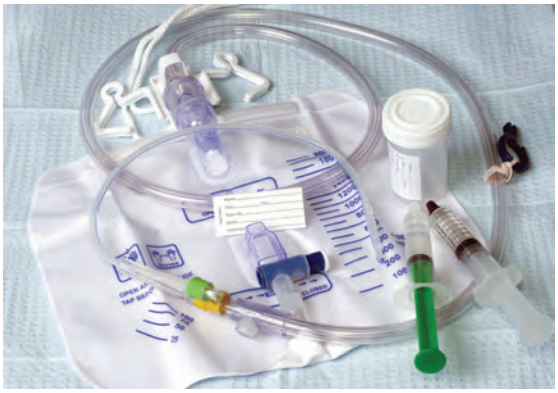
Pressure ulcer prevention education

Access the following education resources from *Wounds International*:

- The webinar "**Real-world solutions for pressure ulcer prevention: Optimising the role of support surfaces**[A]" includes:
  - an overview of the issue of pressure ulcers
  - what to consider when choosing a support surface
  - how to operationalize support surfaces in the clinical setting.
- The program "**Advances in pressure ulcer prevention and treatment made easy**[B]" highlights the guidance on prevention and treatment strategies for pressure ulcer care, with a focus on the role of silicone-foam wound dressings.

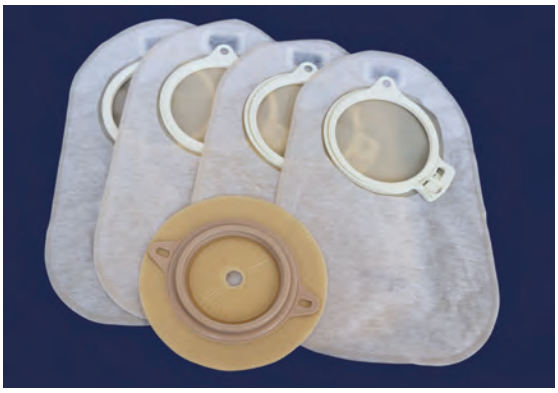
CAUTI toolkit

The Agency for Healthcare Research and Quality has released a **toolkit**[C] for reducing catheter-associated urinary tract infections (CAUTI) in patients who are hospitalized. The toolkit consists of three modules—implementation, sustainability, and resources—that a hospital can use to teach team members how to apply concepts from the Comprehensive Unit-based Safety Program (CUSP) to prevent CAUTI. Each module contains:



- guides
- tools
- archived webinars.

The 4-year project to develop the toolkit brought together subject matter experts and participating hospitals across the United States.

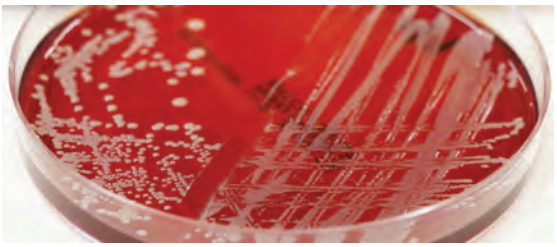


Ostomy patient resources

Here are two resources for patients:

- The Ostomy Society's website **aboutstoma**[D] provides a wealth of resources for patients, including links to videos on how to change an ostomy bag, how to stop stoma leaks, and how to measure stoma size.
- The Memorial Sloan Kettering Cancer

Center provides "**A guide for patients with an ileostomy or colostomy**[E]," which includes types of ostomies, care of an ostomy, body image issues, nutrition, medication, exercise, odor control, sexual activity, work, and travel. It also has a list of frequently asked questions.



Multi-drug-resistant gram-negative bacteria

Wound infections are too often resistant to antibiotics, which makes prevention of infection and early intervention if infection occurs essential. A new resource comes from European colleagues in the form of the article "**Prevention and control of multi-drug-resistant Gram-negative bacteria: Recommendations from a Joint Working Party**[F]," published in the *Journal of Hospital Infection*. Gram-negative bacteria are often difficult to treat and can slow wound healing.

The article includes recommendations for screening, diagnosis, and infection control precautions, such as hand hygiene, single-room accommodation, and environmental screening and cleaning. One recommendation is, "Screening for rectal and wound carriage of carbapenemase-producing Enterobacteriaceae should be undertaken in patients at risk."

STDs guidelines from CDC

The Centers for Disease Control and Prevention (CDC) has **updated its guidelines**[G] for the treatment of sexually transmitted diseases (STDs). The guidelines discuss:

- alternative treatment regimens for *Neisseria gonorrhoeae*
- the use of nucleic acid amplification tests for the diagnosis of trichomoniasis
- alternative treatment options for genital warts
- the role of *Mycoplasma genitalium* in urethritis/cervicitis and treatment-related implications
- updated HPV vaccine recommendations and counseling messages
- the management of persons who are transgender
- annual testing for hepatitis C in persons with HIV infection
- updated recommendations for diagnostic evaluation of urethritis
- retesting to detect repeat infection.

Clinicians can **download the 2015 STD treatment guide app**[H], which combines information from the treatment guidelines and *MMWR* updates. The app features a streamlined interface so providers can access treatment and diagnostic information easily. ■

Online Resources

A. http://www.woundsinternational.com/videos/view/real-world-solutions-for-pressure-ulcer-prevention-optimising-the-role-of-support-surfaces

B. http://www.woundsinternational.com/other-resources/view/advances-in-pressure-ulcer-prevention-and-treatment

C. http://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/cauti-hospitals/index.html?utm_source=PressRelease56&utm_medium=PressRelease&utm_term=Toolkit&utm_content=56&utm_campaign=CUSP4CAUTI2015

D. http://aboutstoma.com/resources/

E. https://www.mskcc.org/cancer-care/patient-education/guide-patients-ileostomy-colostomy

F. http://www.journalofhospitalinfection.com/article/S0195-6701%2815%2900314-X/pdf

G. http://www.cdc.gov/std/tg2015/default.htm

H. https://itunes.apple.com/us/app/std-tx-guide/id655206856?mt=8


Body language can tell you all sorts of things. Like someone is having a stroke.
F
FACE DROOPING
A
ARM WEAKNESS
S
SPEECH DIFFICULTY
T
911
TIME TO CALL 911
American Heart Association
American Stroke Association
Together to End Stroke™
Know the sudden signs.
Spot a stroke F.A.S.T.
strokeassociation.org
Ad Council

NAWCO NEWS

Note from Executive Director

By Cindy Broadus, RN, BSHA, LNHA, CLNC, CLNI, CHCRM, WCC, DWC, OMS

National Alliance of Wound Care and Ostomy®

Over the past few issues of *Wound Care Advisor*, I have introduced you to members of the National Alliance of Wound Care and Ostomy (NAWCO) Board of Directors. In this issue, I'm wrapping up those introductions.

Carol Krueger, RN, BSHA, WCC

Carol became involved with NAWCO through serving two consecutive terms as chair of the Certification Committee. In 2014 she became a member of the Board of Directors.

As a board member, Carol is dedicated to continuing the commitment of ongoing support and education for members. "NAWCO provides the *Wound Care Advisor* bimonthly publication to members with WCC, DWC, and OMS certifications," she says "It's a wonderful way to keep current and provides many timely articles for use in your practice. Additional support is provided to the membership through career development tools, continuing education, mentoring, and even a job board to help members advance their careers in wound care."

Carol is proud to be involved in the impact that NAWCO has made with the certifications they offer. She notes, "Setting high standards, providing education and support, and offering volunteer involvement as a way of paying it forward has made it possible for this organization to become the fastest growing group of wound care certified professionals in the United States. I know I speak for the Board of Directors in saying that we would love to hear members' comments and receive feedback on ways that we can assist the membership as we continue to grow in 2016."

Ottamissiah "Missy" Moore, LPN, BS, WCC, CLNI, CHPLN, GC, CSD-LTC

Missy has been an NAWCO Board Member since 2007. She is the immediate past president of the National Federation of Licensed Practical Nurses and serves as community liaison for Right at Home of Washington, D.C. She has been a member of the District of Columbia State Board of Nursing since 2005.

Missy currently serves as the committee chair for the LPN Competence Committee for CGFNS International. She served on the LPN Standards Committee of CGFNS International from 2007 to 2011. In 2012, she was appointed to the National League for Nursing Licensed Practical Nurse Ad Hoc Committee.

Missy embraces community outreach regarding wound care with a strong focus on nursing education. Empowering the hands-on provider and networking has been her main focus since her appointment to the board. Since 2007, she has coordinated an annual, citywide training in the District of Columbia on wound care topics. Wound care providers from the area attend a day of sessions on numerous wound care subjects presented by national speakers. The 250 or so attendees receive education, training, and continuing education at no cost. Missy is committed to serving her wound care community by training, edu-

cating, networking, and mentoring.

Below is the complete list of board members:

Debbie Dvorachek, LPN, WCC—president
Kathryn Pieper, RN, BSN, WCC—vice president
Carol Krueger, RN, BSHA, WCC—board member
Ottamissiah Moore, LPN, WCC—board member
Cheryl Robillard, PT, WCC, CLT—board member
Rosalyn Jordan, RN, BSN, MSc, CWOCN, WCC—board member
Andrew Joiner, CWCMS—board member
Clive Horrocks, RN, BSN, LHRM, WCC—board member
Michael Richardson, RN, BSN, LHRM, WCC—board member

As you have seen, the NAWCO Board of Directors are a passionate group of wound care professionals. They have a genuine concern for the advancement of healthcare professionals in the specialty areas of wound and ostomy care. Visit the **NAWCO website** at www.nawccb.org/ to read what we are all about, and put faces to the names by seeing photos of our Board of Directors.

New certificants

Below are WCC, DWC, and OMS certificants who were certified from October to November 2015.

Cheryl Abeyta
Aaron Acquisto
Eva Adams
Cindy Adams
Diana Adams
Mobolaji Adesina
Amanda Adkins
Cheryl Ajax
Doreen Akum
Pearl Akwaja
Maria Alcantara
Mary Alley
Jennie Anderson-Nowak
Elizabeth Anich
Lorraine Antoni
Doreen Arends
Diana Arias
Jennifer Armendariz
Jennifer Atteberry
Vicki Avery
Boguslawa Baginska
Jane Bailey
Rachael Baird
Jackual Baker
Pascasio Baniqued, Jr.
Sharon Banks
Mauvlet Barham
Tammy Barnett
Hector Barron
Josette Batsenikos
Christina Baxter
Courtney Beahn
Pam Beam
Tricia Beehler
Linda Beers-Origoni
Shelley Bello
Anita Bettinger
Johanna Biola
Christy Blackburn
Maria Blaikie
Kristy Blair
Roger Bleskachek
Dawn Boggs
Crystal Bohlen
Marina Borodkina
Henry Boswell
Jennifer Bothun
Donna Boudreaux
Leane Boudreaux
Tonya Boutwell
Kelly Breiwa
Stephanie Brigham
Catherine Britton
Glenny Broadhurst
Donna Broderick
Sheila Brodeur
Barbara Brophy-Parrish
Brenda Brown
Vicki Brown
Adam Bruce
Joan Brundick
Caitlyn Brune
Chalina Bryant
Melinda Buchholz
Patricia Buckley
Amanda Burleson
Jana Caffrey
Clare Callahan
Debra Campbell
Stephanie Campbell
Stephanie Campbell
Maggie Carpenter
Chrissa Carpenter
Amber Carpenter
Inocencia Carrano, MD
Jennifer Carrier-Masse
Maria Castro
David Caterino
Stephanie Cavallaro
Tracey Caylor
Idalia Cerna Barrera
Maria Lourdes Cesista
Tammy Chapman
Annette Chessar
Laura Chevreaux
Robin Chirino
Jaime Christopher
Trisha Clabaugh
Lisa Clark
Linda Clark
Susan Colgan
Sarah Colon-Randolph
Tesha Connors-Robinson

Tiffany Contet
Shannon Cook
Crystal Cook
Jennifer Court
Suzette Cox
Kristina Creech
Morgan Cremeans
Laurie Crevier
America Crocker
Shanna Cronin
Lisa Crowe
Stephanie Cutler
Ameet Das
Doris Davis
Linda Davis
Christine Degrazia
Anna Dehler
Terresa DeMoss
Sherry DeMoura
Michelle Derryberry
Christopher Diaz
Brenda Dicus
Amy Dieckhoner
Marcia Dippold Cristini
Jennifer Divine
Jeffry Dixon
Heather Dones-Cruz
Melody Doran Manns
Melanie Doyle
Trisha Dubois
Sonya Dueser
Arielle Duff
Diane Dugan
Jennifer Duncan
Mandi Dunkel
Michelle Durham
Ikema Dwight
Tabitha Dye
David Dyer
Michelle Eaton
Erin Ekstrand
Arvand Elihu
Anita English
Susana Enriquez
Connie Estes
Lori Evans
Melanie Evans
Jason Evans
Mary Jane Facciponti
Amber Faglier
Genevieve Fastnedge
Sharon Feldmann
Jennifer Ferguson
Tracy Field
Connie Fielding
Rosenell Fields
Mary Finan Frankey
Jhoanne Fines
Ashley Flaherty
Ashley Fletcher
Wislande Fleurissant
Andrea Flores
Dianne Florio
Thomas Foronda
Ann Foster
Nicole Fox
Marcia Frank Roy
Betsy Franklin
Karen Franklin
Holly Freeman
Shannon Frost
Miranda Frost
Carolyn Frye
David Fulton
Amy Gandy
Diana Garza
Courtney Geesling
Elizabeth George
Lee Giampietro
Shayla Giddens
Cassandra Gilbert
Anne Ginsberg
Maryellen Glennon
Constance Gliniecki
Marianne Gluvna
Georganna Goodale
Laurie Goodenow
Tanya Goodrich
Lauren Gorman
Laurali Gottschalk
Elisha Gowen
Andrea Grant
Jo Ann Gresham
Ruth Grover
Shannon Gupton
Beverly Hageman Farrar
Melissa Hall
Jeffrey Hall
Joy Halla
Kimberlie Hamilton
Heather Hamman
Sofi Hanna
Kristy Hanner
Crystal Hansel
Maria Harkness
Julie Harmon
Nicholas Harry
Julie Hart
Misty Hebert
Catherine Heiner
Antoinette Henderson
Michelle Hendrix
Lisa Hezel
Lois Hochstedler
James Hofer
Patricia Hollifield
Larayn Holte
June Hood
Patrice Horn
Melissa Hosier
Melissa House
Belinda Houston
Jeffery Howard
Renee Hudson
Johnson Ibitoye
Emad Ishak
Megan Jackson
Linda Jamshidi
Mary-Eliot Januszewski
Michelle Jaspers
Jenny Jelliffe
Shamika Jemison-Petty
DeMorris Jenkins
Kerris Jennings
Michael Jermakian
Jennifer Jesko
Megan Jochem
Adam Johnson
Casey Johnston
Corey Jones
Kelly Jones
Kimberley Jordan-Horte
Jacqueline Jorgensen
Lavonda Joseph
Paula Kaercher
Rutwa Kansara
Beth Kariuki
Elyse Karpa
Carley Kaufman
Robin Keeler
Terri Ketchum
Elizabeth Keys
Brian King
Nina Kirick
Janet Kirschbaum
John Kiss
Aikande Kitutu
Karen Klein
Michael Klements
Julie Kolonick
Karen Konarski
Suzanne Koosman
Betsy Korbel
Deanna Kramer

Susan La Gioia
Nicole Lachman
Barbara Langan
Armando Lastra
Melissa Law
Orapin Lee
Sherry Lehota
April Leighton
Sara Lemaster
Karen Lewis
Tammy Lindsay
Shirley Lindsey
Raymond Linger
Jayne Liskey
Valiantsina Litterer
Erin Lohr
Mary Lopez
Michelle Loudermilk
Emma Loyless
Kelly Lyons
Julia Macauley
Julie Maddux
Jennifer Mallonee
Kimberly Mancinelli-Hough
Elizabeth Manis
Karen Marcus
Jennifer Maschke
Elizabeth Maxim
Kiley McAllister
Heather McCarty
Renee McClellan
Jamie McCullough
Stephane McDonald
Linda McGarigle
Tina McIntosh
Karla McKee
Angel McKinney
Rhonda McLaughlin
Diana McMaster
Brandy Meers
Melanie Megias
Tamara Merrill
Scott Meyers
Melba Miller
Vivian Miller
Evelyn Miller
Shane Minix
Susanna Mitchell
Valerie Mobilian
Nima Moghaddas, DPM
Bonnie Monroe
Krista Montgomery
Stephanie Mooney
Alvin Morazan
Kimberly Morel
Cindy Morris
Dawn Mrotek
Barry Mullen, MD
Nicole Munson
Ellen Murphy
Laurie Nadeau-Stout
Tammy Naser
Theresa Nebraska
Joyce Neilsen
Mary Nelson
Newton Nhong
Nicholas Njoroge
Stacie Novak
Nichole Olenechuk
Olivia Olson
Melanie Olson
Catherine Oppong
Jodi Ormsby
Tatum O'Shea
Faye Otis
Yvonne Owens
Desiree Palenzuela
Kristine Papagni
Suja Pathalil
Irene Patkowski
Gary Patton
Dianne Pauselius
Pamela Peduto
Tessie Peeler
Sheila Pennington
Melissa Perez
Gladis Perez
Catherine Perryman
Wendy Pestano
Melanie Peterson
Jessica Peterson
Katherine Peterson
Jan Pharr
Teresa Phillips
Angela Pierce-Horner
Janice Piraino
Erin Ploutz
Colleen Pohmer
Karissa Pope
Norberto Portales
Renee Powell-Matta
Doreen Presz
Jennifer Price
Evelina Prodanov
Christina Puglia
Michelle Pullen
Marci Quarzo
Benjamin Ramos
Jeanne Randall
Colleen Rapp
Allison Ray
Michelle Reader
Joseph Reising
Holly Repoff
Sarah Reyes
Darren Reynolds
Youakisha Richards
Sarah Rickard
Heather Ridgeway
Patricia Ringen
Sylvia Rivera
Tabitha Rivers
Maureen Roberts
Janice Roberts
Surin Rodino
Janette Rodriguez
Jessica Rodriguez
Jennifer Rodriguez-Fernandez
Michele Rogers
Angela Romano
Jacquelyn Ross
Faye Ruiz
Rebecca Runyan
Beverly Russell
Paula Russo
Kristine Ryan
Caterina Salas
Linsey Santamaria
Marc Sanyal
Barbara Sartell
Katherine Schaetzle
Phyllis Schlag
Sarah Schmall
Christina Schult
Lisa Schwai
Susan Sellecchia
Scott Shape
Kristene Sheppard
Jessica Sheriff
Jared Shippee, DPM
Michelle Shrout
Jasdeep Sidhu
Sarah Sigsbury
Carmen Silver
Jadranka Skifich
Dana Skinner
Danielle Slagle
Wayne Slate
Traci Smith
Amanda Smith
Jessica Smith
Tonya Smith
Kerrie Smith
Brenda Snyder
Matthew Somerville
Lindsey Stacks
Sarah Stahl
Kristen Stash

Amanda Steinhauser
Janet Steinhiser
Kari Stiles
Melissa Stiles
Laura Stillman
Patricia Stillwaggon
Krystal Stucky
Marianne Suber
Tara Swan
Amy Swank
Helen Sy
Vanessa Sylvia
Debra Szafran
Valentyna Tabaka
Jennifer Ternes
Mary Thomas
Allison Thompson
Sarah Toadvine
Jill Tobias
Elizabeth Tokunboh
James Tomlinson
Tana Traxler
Jodi Trayer
Anastasia Tselengidis
Flordeliza Turner
Brigida Unida-Adis
Jothi Vaidyalingam
Deborah Vandiver
Jose Vargas Jr.
Jennifer Vattilano
Elaina Veney
Eloisa Vicente
Michelle Vieth
Christopher Vore
Cheryl Wade
Lucinda Walker
Anne Walsh
Dale Walter
Christine Walters
Devan Ward
Hayley Warner
Diamond Washington
Stephanie Washington
Meghan Washington
Nicole Watson
Letitia Weber
Bethany Wentzell
Deborah Westbrook
Vickie White
Tanya Wiatr
Kiesha Wiggins
James Wilcox
Ma Lourdes Wiley
Carolyn Williams
Amber Williamson
Kimberly Wilson
Hannah Wolf
Barbara Woo
Tracey Woolley
Lila Yettou
Carmelita Zablan
Amanda Zetick

Recertified certificants

Below are WCC, DWC, and OMS certificants who were recertified from October to November 2015.

Dianna Alesci
Lisa Allegri
Keirsten Ancker Eberhart
Sherry Anderson
Sophia Antillon
Adriana Austin
Roberta Banach
Rebecca Banaszak
Wanda Barnes
Laura Blawat
Anne Blevins
Karen Bonoyer
Jayna Boren
Aryn Bowser
Cecil Boyd
Garth Buresh
Elisabeth Cabral
Tonia Carroll
Dennis Carter
Magnolia Carter
Cynthia Cash
Patricia Ciccone
Alisa Clawson
Marla Clement
Michael Clifford
Carrie Anne Cmarada
Felicia Cojocnean
Lori Coleman
Elaine Cooper
Carmen Cooper-Oguz
Amy Cordes
Julia Corley
Mary Cosca
Stephanie Crawford
Sonya Crawford
Bonita Curtis
Rachel Davis
Margarita De La Garza
Linda Deas
Marisa Dela Rosa
Lena DeMiles
Rose-Marie Desir
Carol DiForte
Anne Doughty
Andrea Dunn
Sara Dye, MD
Wendy Ehnis
Cecile Emanuel
Ida Flores
Mary Florez
Nikoline Frade
Jenny Franklin
Eileen Fregoe
Elizabeth Frey
Theresa Gambill
Michelle Gambrel
Edward Garcia
Denise Gerhab
Dawn Gibson
Janice Giles
Mary Giorla
Robyn Goldman Strauss
Charisse Gonzales Maquilan
Kimberly Gordon
Andrea Grant
Kimberley Grover
Beth Gruzinskas
Pamela Hammond
Theresa Hanko
Chelseta Harding
Lori Harrah
Linda Harrison
Barbara Heath
Cassandra Heiser
Wendy Henry
Shellie Hensley
Catherine Herek
April Heydinger
Patricia Hoffman
April Holtry
Kim Holzschuh
Regina Hornback
Damon Isajiw
Catherine Jacobs
Lori Jenkins
Cathy Jennings-English
Sandi Jiongco
Kristine Johnson
Serenity Kearns

Karen Kelly
Amy Kirchner
Kimberly Kluga Kogut
Marilee Knapp
Melissa Koenig
Denise Kovach
Amy Krempasky
Jessica Kuznia
Elissa Labyak
Luda Landman
Virginia Lane-Pacheco
Sandra LaPointe
Mary Leigh
Gwendollyn Lemke
Julie Ligday
Elisa Locke
Kathleen Long
Mary Lorman
Greggy Lubin
Betty Lyons
Olena Lyubynska
Karen Madrid
Barbara Maffia
Danielle Malchano
Odette Mannix
Rhonda Marcum
Julie Matson
Lorraine McCloskey
Kathleen McGarry
Elizabeth McMaster
Lori McNellie
Laura Means
Terry Miles
Beth Miley
Evelyn Miller, MD
Jennifer Minor
Jamie Mitnick
Nancy Morgan
Dawn Mott
Amanda Myers
Karrie Nason
Nanie Ner
Mai Nguyen
Juliana Nnaji
Rachel Norris
Laury Nyberg
Diane O'Neil
Stephanie Ortt
Benjamin Pablo
Marguerite Pak-Greeley
FaithAnn Palermo
Concepcion Paloma
Wayne Paredes
Monique Pascual
Todd Pawuk
Carolina Penasales
Carmen Pereira
Selena Pevahouse
Tammy Pierce
Shelly Polite
Nancy Pollard
Berenige Porras
Lana Potocnjak
Tammy Pugh
Ulysses Quijada
Naomi Randazzo
Rebecca Ratliff
Marcia Rederth
William Richlen
Lindsay Rish
Rita Roberts Slack
Margarita Rodriguez
Karla Ronneberg
Karen Rose
Lissamma Roy
Andrew Russell
Stanley Rynkiewicz
Mary Sallinger
Donna Sardina
Cindy Schiller
Lisa Schoen
Bonita Schwarz
Corinne Schwarz
Lisa Scott
Connie Shupe
Amanda Silvers
Sally Simcox
Jennifer Sison-Mariano
Jadranka Skifich
Brenda Small
Clynthia Smith
Pamela Snow
Linda Snyder
Soundaram Som
Sharon Sommer
Charity Songer
Lori Spiezio
Cynthia Stephens
Stacy Stevenson
Dolores Stewart
Marsha Sullivan
Teresa Suttles
Tina Swanner
Dawn Sweeney
Therese Taylor
Amber Teague
Tameasha Thornton
Ruth Tistoj
Paciencia Toney-Joiner
Susan Tower, MD
Michael Turcinovic
Sandra Uzzalino
Stephanie Vaccaro
Martha Valero
Hemalatha Varadhan
Annie Victor-Zaslow
Barbara Viggiano
Penny Walls
Laura Walter
Tina Wheeler
Amie Whitehead
Patti Whitmer
Linda Wildeboer
Kendra William
Denise Williams
Imnas Williams
Deborah Williams
David Wilson
Marilyn Wilson
Raeleen Wilson
Marcia Wilson
Jessica Withum
Donald Wollheim
Donald Wollheim
Susan Wood
Mindy Xu
Mitchell Yadanza
Denise Young
Wilma Zamora
Deborah Zemla

WHEN YOU DON'T KNOW WHAT TO SAY, STAND UP.

When someone you love is diagnosed with cancer, you have the power to help. There are many ways you can stand up and show that you care.

THEY TALK, YOU LISTEN. One of the most helpful and important things you can do is listen—without judgment and resisting the urge to give advice.

DON'T ASK, DO TELL. Instead of waiting to be asked for help when it is needed, be specific about what you can do and when, such as: prepare a meal, babysit, pick up groceries, help with pets, or provide rides to and from appointments.

LIVE AND LEARN. Educate yourself about your loved one's diagnosis and treatment. When you understand what a cancer patient is going through, you're better able to help keep information clear, track questions, and know how you can be most useful.

STAY CONNECTED. After the initial diagnosis, people tend to drift away. Be someone to count on for the long haul. Check in, send a quick note, or drop off a book. Small gestures go a long way.

Visit ShowThatYouCare.org to learn more about how you can stand up for someone you love.

Cancer Treatment Centers of America®

STAND UP TO CANCER®

Cancer Treatment Centers of America is a proud supporter of Stand Up To Cancer, an initiative designed to accelerate groundbreaking cancer research for the benefit of the patient.

Stand Up To Cancer is a program of Entertainment Industry Foundation,a 501(c)(3) charitable organization.