


Wound Care ADVISOR

PRACTICAL ISSUES IN WOUND, SKIN, AND OSTOMY MANAGEMENT

Official journal of National Alliance of Wound Care
and Ostomy 



Preventing pressure ulcers in pediatric patients

Lymphedema, Part 2

**Case study: Use of infrared
technology to detect
deep tissue injury**

**Comprehensive
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July/August 2015 • Volume 4 • Number 4
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Tips on staging pressure ulcers

Pressure ulcers have been a health concern for a long time—since at least 5,000 years ago, when evidence of a pressure ulcer was found on an ancient Egyptian mummy. But not until 1975 did the staging classification system we're familiar with begin. This system was designed to make things easier by creating a universal way to describe and communicate the various levels of tissue destruction.

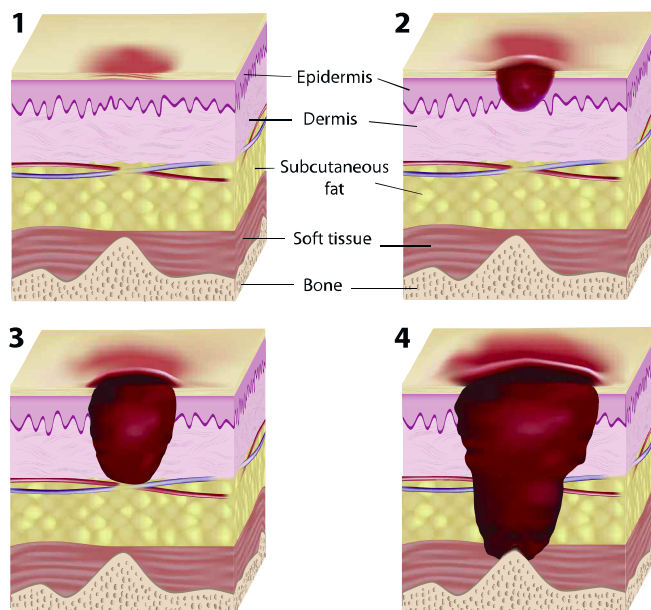
In my travels and work as a wound care educator, the questions I'm asked most frequently relate to pressure ulcer staging. How can this be, given that the staging system was supposed to make it easier for us? Most wound care clinicians who live and breathe wound care 24/7 (the experts) can probably stage a pressure ulcer in their sleep. But the staging struggles of nonexpert clinicians make staging the wound experts' problem. In many facilities across the country, staging is so challenging that some wound care experts have forbidden anyone else in their facility to document a pressure ulcer's stage in the medical record. As desirable as this may sound to some of us, I don't think this approach is practical. One person can't be everywhere at once.

To stage a pressure ulcer accurately, you need to understand the anatomy and physiology of

tissue destruction and be able to interpret what you see. I don't have all the answers to the staging problem, but I have identified a few issues clinicians find most confusing—differentiating stage II and stage III pressure ulcers, suspected deep tissue injury, and restaging and downstaging. Here are a few tips that may help.

- Stage II pressure ulcers are pink and partial thickness, without necrotic tissue (yellow or black). Tissue destruction is seen through the epidermis and into, *but not through*, the dermis. (See *Stages of pressure ulcers*.) In contrast, stage III pressure ulcers involve tissue destruction through the dermis and into

Stages of pressure ulcers



the subcutaneous tissue. Of course, there's no dotted black line showing where epidermis and dermis end, so we have to rely on our knowledge of anatomy: The epidermis is thinnest on the eyelids (0.05 mm) and thickest on the palms and soles (1.5 mm). The dermis is thinnest on the eyelids (0.3 mm) and thickest on the back (3.0 mm). By comparison, a single sheet of copy paper is 0.1 mm thick, while a U.S. penny is 1.5 mm thick.

- A deep tissue injury is a localized area of intact, discolored skin (purple or maroon) or a blood-filled blister. *Intact* is the key word. Once the skin opens, the wound must be reclassified as unstageable, stage III, or stage IV. Deep tissue injury implies tissue damage at the subcutaneous level or deeper, so it can't possibly be a stage II wound.
- Reverse or downstaging doesn't accurately characterize what's occurring in the ulcer. Stage III and IV pressure ulcers heal by filling in with granulation (scar) tissue—not new dermis and subcutaneous tissue. Therefore, the staging system definitions can be used only one way—as the wound progresses—and not in reverse, as the wound heals. A stage IV pressure ulcer can't become a stage III, stage II, or subsequently stage I ulcer. When a stage IV ulcer is healing or healed, it should be classified as a healing or healed stage IV pressure ulcer—not a stage I or stage 0 pressure ulcer.
- Progression (worsening) of tissue destruction follows an upward scale of the staging system—from least to worst: stage I, stage II, stage III, and stage IV (the deepest level of tissue destruction). Unstageable and suspected

Resources

NPUAP: Reverse staging

NPUAP: Staging guidelines

NPUAP: Deep tissue injury

deep tissue injuries are categories, not stages. Based on their definitions, they would be equal to or greater than a stage III ulcer. In other words, they can't be recategorized as stage I or II ulcers.

The staging system isn't perfect and still has many gray areas, but for now this is the internationally accepted tool we need to use. When staging gets confusing or falls into a gray area, I find it's best not to overthink things. Instead, go back and reread the basic definitions. For answers to other staging questions, check out the article "**FAQs for pressure ulcer staging**".



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Selected references

National Pressure Ulcer Advisory Panel. The Facts about Reverse Staging in 2000: The NPUAP Position Statement. http://iwa.joerns.com/docs/HTML/education/documents/Facts_about_Reverse_Staging_in_2000.pdf

National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel, and Pan Pacific Pressure Injury Alliance. *Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline*. Haesler E, ed. Osborne Park, Western Australia: Cambridge



Leg revascularization fails to improve outcomes in nursing home patients

Lower-extremity revascularization often fails to improve outcomes in nursing home patients, according to an article in *JAMA Internal Medicine*.

“Functional outcomes after lower extremity revascularization in nursing home residents: A national cohort study” found that few patients are alive and ambulatory a year after surgery, and those who are alive have little, if any, gain in function. The study, which included 10,784 patients, was based on data from nursing homes participating in Medicare or Medicaid.

The results indicate that the decision to have surgery should be made after considering several factors, including goals for care, such as pain relief. However, the researchers note that ambulation “may not be the primary objective of treatment and may be impossible to obtain.”

Risk score for amputation developed

Researchers have developed a risk score for amputation that can be easily used in clinical practice, according to an article in *Diabetes Care*. The Eurodiale score ranges



from 0 to 4.5, with a higher score reflecting a greater risk.

“Predictors of lower-extremity amputation in patients with an infected diabetic foot ulcer” notes that the new score may have better prognostic accuracy than the International Working Group on the Diabetic Foot classification system, but more research is needed.



Infection prevention guidance for hospital visitors released

The Society for Healthcare Epidemiology of America has published **“Isolation precautions for visitors”** in *Infection Control & Hospital Epidemiology*. The guidance is intended to reduce the potential for visitors in healthcare facilities to spread infections.

Recommendations include hand hygiene before entering and after leaving a patient's room and using surgical masks when visiting patients under droplet or

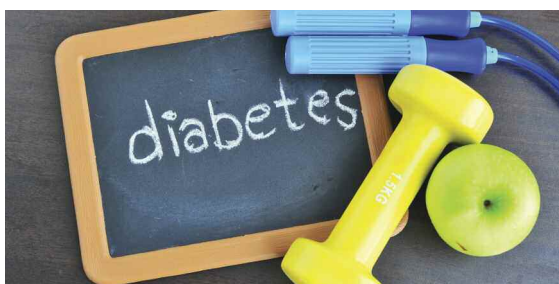
airborne precautions. Guidance based on pathogen type is also provided.



Weekend admission increases risk of HACs

A study in *BMJ* reports that weekend admission to the hospital increases the likelihood of hospital-acquired conditions (HACs), cost, and length of stay.

“**Incidence of ‘never events’ among weekend admissions versus weekday admissions to US hospitals: National analysis**” notes that after adjusting for patient and hospital co-factors, the probability of having one or more HACs is more than 20% higher in weekend admissions compared with weekday admissions.



Position statement on diabetes self-management education released

“**Diabetes self-management education and**

support in type 2 diabetes: A joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics,” published in *Diabetes Care*, includes an education algorithm that defines when, what, and how diabetes self-management education and support should be provided for adults with type 2 diabetes.

The algorithm notes four critical times to “assess, provide, and adjust diabetes self-management education and support”—diagnosis, annual assessment, when new complicating factors occur, and when transitions in care occur. It also contains action steps and notes detailing when the primary care provider or specialist should consider referral.



EPO may improve some outcomes for SCI patients with pressure ulcers

Recombinant human erythropoietin (EPO) may improve outcomes for some patients with spinal cord injuries (SCI) who have chronic pressure ulcers, according to a pilot study in *Ostomy Wound Management*.

“**The prevalence of anemia of chronic disease in patients with spinal cord injuries and pressure ulcers and the impact of erythropoietin supplementation on wound healing: A de-**

scriptive pilot study” reports that the prevalence of pressure ulcers in the SCI outpatient population is at least 35%, and the authors recommend greater vigilance of patient nutrition.



Cilostazol may prevent foot ulcers in patients with diabetes

The *International Wound Journal* has published “**Cilostazol prevents foot ulcers in diabetic patients with peripheral vascular disease.**”

The study, which included 31 patients without claudication who did not receive cilostazol and 47 patients with claudication who received cilostazol for 24 weeks, had a median follow-up of 16 months. During the follow-up, 4% of the patients who received cilostazol had the start of foot ulceration, compared with 35% of those who did not receive the drug.



Risk factors for surgical wound dehiscence identified

“**Determining risk factors for surgical wound dehiscence (SWD): A literature review,**” in *International Wound Journal*, reports that

obesity and wound infection, particularly in the case of abdominal surgery, are the most common risk factors for surgical wound dehiscence, based on an analysis of 15 papers.

However, the researchers found limited reporting of variables associated with SWD across other surgical domains, a lack of risk assessment tools, and a lack of clarity in the definition of SWD.



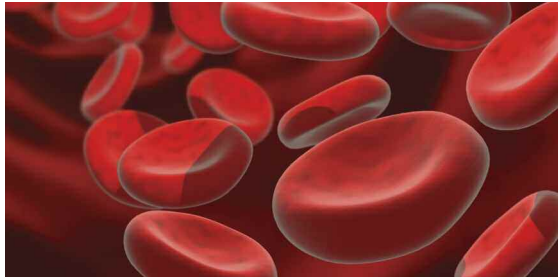
Tap water effect in reducing colonization of skin wounds studied

Skin wound irrigation with tap water leads to further reduction of gram-positive bacteria compared with 0.9% sodium chloride sterile solution, with no difference in colonization of hemolytic bacteria, gram-negative bacteria, and fungi, according to a study in *International Wound Journal*.

“**Tap water versus sterile saline solution in the colonisation of skin wounds**” also found that the colony-forming unit count before and after irrigation was similar in wounds irrigated with tap water and wounds irrigated with 0.9% sodium chloride sterile solution.

Topical hemoglobin spray effective for chronic venous leg ulcers

The study “**Expected outcomes from topical**



haemoglobin spray in non-healing and worsening venous leg ulcers,” published in the *Journal of Wound Care*, found that topical hemoglobin spray is more effective than standard treatment alone.

The researchers created simulated data for 25,000 “patients” based on analysis of 36 patients who received standard care and 36 who received standard care and the hemoglobin spray. They then used the data to forecast healing outcomes over 12

months, with 85% of wounds that received the spray expected to heal compared with 13% in the standard-care group.

Factors affecting closure of temporary ileostomies identified

End ileostomy and intra-abdominal abscess delay reversal of temporary ileostomies, according to a study in the *International Journal of Colorectal Disease*.

“**Factors affecting timing of closure and non-reversal of temporary ileostomies**” identified age, end ileostomy, higher body mass index, and preoperative radiotherapy as factors for nonreversal.

Of the 485 ileostomies that were intended to be temporary, 26% remained permanent. ■

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* J. Lindfors, *Ostomy/Wound Management*. 2004; 50 (8): 28-41.



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Preventing pressure ulcers in pediatric patients

At one hospital, a multidisciplinary pressure-ulcer prevention program has reduced incidence by two-thirds.

By Roxana Reyna, BSN, RNC-NIC, WCC, CWOCN

As wound care clinicians, we are trained—and expected—to help heal wounds in patients of any age and to achieve positive outcomes. Basic wound-healing principles apply to all patients, whatever their age or size. The specific anatomy and physiology of vulnerable pediatric patients, however, requires detailed

and prevalence in 2010. Data collected by the hospital's pressure-ulcer prevention specialists showed a high rate of pressure ulcers in the neonatal and pediatric intensive care units. At that time, the hospital lacked a specific pressure-ulcer prevention plan. When it joined the National Database of Nursing Quality Indicators®, leaders decided to create a time-specific measurable goal—to decrease pressure ulcers by 50% within 18 months of implementing a prevention program.

DCH recruited me as their skin-care and wound-prevention specialist to assist the wound care collaborative team in creating the prevention program. The core of the program is a multidisciplinary team approach. Team members include a nursing administrator, physician, certified wound ostomy nurse, wound-care certified nurses, nurse educators, skin-care champions, physical therapist, occupational therapist, dietitian, and representatives of the materials management, environmental services, and case management departments. Called the SKIN team (short for “Saving Kids’ Integument Now”), its motto is “Prevention is critical.” The team involves the patient’s family member or guardian in developing and implementing the plan of care. The pressure-ulcer prevention program includes a bundle of components that have reduced pressure ulcers in adult populations, along with



wound care. Unfortunately, little evidence-based research exists to support and direct the care of pediatric patients with pressure ulcers. This article describes efforts to reduce pressure ulcers in pediatric patients at Driscoll Children’s Hospital (DCH) in Corpus Christi, Texas.

Making a change

DCH began tracking pressure-ulcer inci-

recommendations from the pediatric sections of the 2014 guidelines of the National Pressure Ulcer Advisory Panel (NPUAP).

Assessment

As in adults, many factors contribute to skin breakdown and pressure ulcers in pediatric patients—duration and amount of pressure, friction, shear, moisture, perfusion, malnutrition, infection, anemia, and immobility. The 2014 NPUAP guidelines describe risk factors to assess for in pediatric patients. (See *Assessing risk in pediatric patients*.)

Management

The DCH pressure-ulcer prevention program addresses physician, staff nurse, and nurse-technician education; skin-care regimen; nutritional optimization; appropriate support surfaces and patient repositioning; moisture management; and guidelines for implementing care.

Education

Pressure-ulcer prevention education is a mandatory yearly competency for all nursing and clinical staff. Physicians also receive education on pressure-ulcer staging and proper documentation and coding of pressure ulcers. Quarterly skin-care fairs teach staff about skin- and wound-care products used at DCH, including product selection. Staff can view demonstrations on how to apply these products and learn how to document skin care in the electronic health record. Also, they can get troubleshooting tips on stoma care, gastrostomy-tube sites, and diaper care. Home health agencies are invited to attend the fairs as part of an outreach to promote continuity of care.

Skin-care regimen

DCH has standardized its skin-care line for use with patients ranging from the smallest, most fragile neonates in the neonatal intensive care unit to young

Assessing risk in pediatric patients

To evaluate pressure-ulcer risk in pediatric patients, guidelines from the National Pressure Ulcer Advisory Panel (NPUAP) recommend clinicians perform an age-appropriate assessment that includes:

- activity and mobility levels
- body mass index, birth weight, or both
- skin maturity
- ambient temperature and humidity
- nutritional indicators
- perfusion and oxygenation
- presence of an external device
- duration of hospital stay.

NPUAP also recommends assessing the patient's skin at least daily and after procedures for changes related to pressure, friction, shear, and moisture. Be sure to examine the skin under and around medical devices at least twice daily for signs of pressure injury.

adults. Product evaluation on our neonatal patients found no adverse reactions over thousands of applications. The skin-care products we use are made for sensitive skin and contain natural oils and botanicals that provide cleansing, nourishment, and moisture.

Optimizing nutrition

Patients at risk for pressure ulcers require adequate nutrition and hydration; the plan of care must address these needs. Nutritional supplements, including parenteral and enteral supplements, are used as needed to meet children's nutritional goals.

Appropriate support surfaces

As part of our pressure-ulcer prevention program, we assessed all mattresses and surfaces in warmers, isolettes, cribs, bassinets, and standard hospital beds. We found the mattresses in our pediatric intensive care unit (PICU) were years older than manufacturers' recommendations.

In light of the limited sizes available and minimal literature on neonatal and

Patients at risk for pressure ulcers require adequate nutrition and hydration.

pediatric support surfaces, we asked a company to make prototypes for neonate and infant surfaces. Before finalizing our purchase decision, we conducted a small study to evaluate the pressure redistribution of support surfaces and outcomes by performing pressure mapping on multiple pressure-redistribution surfaces—standard foam, high-resiliency multilayered pressure redistribution foam, and viscoelastic multilayered pressure-redistribution foam. To determine the effectiveness of each surface, we used pressure mapping with an X3 sensor. A comparison of average pressures (mm Hg) found viscoelastic multilayered surfaces provided the greatest pressure redistribution and had lower average interface pressures.

Based on these results, we chose a true pressure-redistribution mattress for our special populations. All PICU mattresses have been upgraded to a non-powered pressure-redistribution mattress replacement system with self-adjusting technology. Remaining standard beds have been converted to an innovative mattress replacement system. Although the mattresses are made from the best performance materials, repositioning patients every 2 hours and as needed remains an important nursing intervention in preventing pressure ulcers.

Moisture management

DCH replaced cloth pads with disposable underpads manufactured with a new technology that keeps the patient dry by wicking away moisture. Barrier creams

are used for the diaper area to help protect skin integrity.

Getting results

Data show that since DCH implemented its pressure-ulcer prevention program, our pressure-ulcer incidence has fallen 66%. These results show pressure ulcers can be prevented by identifying patients at risk and implementing appropriate prevention strategies. At DCH, our ultimate goal is zero hospital-acquired pressure ulcers. ■

Roxana Reyna is a skin and wound care specialist at Driscoll Children's Hospital in Corpus Christi, Texas.

Selected references

- Brem H, Maggi J, Neirman D, et al. High cost of stage IV pressure ulcers. *Am J Surg*. 2010;200(4):473-7.
- Bryant R, Nix D. *Acute and Chronic Wounds: Current Management Concepts*. 4th ed. St. Louis, MO: Mosby; 2012.
- Delmore B, Lebovits S, Baldock P, Suggs B, Ayello EA. Pressure ulcer prevention program: a journey. *J Wound Ostomy Continence Nurs*. 2011;38(5):505-13.
- Galvin PA, Curley MA. The Braden Q+P: a pediatric perioperative pressure ulcer risk assessment and intervention tool. *AORN J*. 2012;96(3):261-70.
- Hanson D, Thompson P, Langemo D, Hunter S, Anderson J. Pressure mapping: a new path to pressure ulcer prevention. *Wound Care Advisor*. 2012;1(1):15-9.
- How-to Guide: Prevent Pressure Ulcers*. Cambridge, MA: Institute for Healthcare Improvement; 2011. www.ihl.org/resources/Pages/Tools/HowtoGuidePreventPressureUlcers.aspx
- McCaskey MS, Kirk L, Gerdes C. Preventing skin breakdown in the immobile child in the home care setting. *Home Healthc Nurse*. 2011;29(4):248-55.
- National Pressure Ulcer Advisory Panel, European Pressure Advisory Panel and Pan Pacific Pressure Injury Alliance. *Prevention and Treatment of Pressure Ulcers: Quick Reference Guide*. Emily Haelser, ed. Cambridge Media: Perth, Australia; 2014.
- Noonan C, Quigley S, Curley MAQ. Using the Braden Q Scale to predict pressure ulcer risk in pediatric patients. *J Pediatr Nurs*. 2011;26(6):566-75.
- Pieper B, Ratliff C; National Pressure Ulcer Advisory Panel. *Registered Nurse Competency-Based Curriculum: Pressure Ulcer Prevention*. www.npuap.org/wp-content/uploads/2012/03/NPUAP-RN-Curriculum-landscape1.pdf

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Comprehensive skin assessment

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's an overview of performing a comprehensive skin assessment.

In the healthcare setting, a comprehensive skin assessment is a process in which the entire skin of a patient is examined for abnormalities. It requires looking at and touching the skin from head to toe, with a particular emphasis on bony prominences and skin folds. Comprehensive skin assessment is repeated on a regular basis to determine whether changes in the skin's condition have occurred. The goal of a skin assessment is to identify problem areas promptly for treatment and prevention.



The answers to the questions below will help ensure your skin assessments are truly comprehensive.

When and how often should I perform a comprehensive skin assessment?

- As soon as possible but within 8 hours

of admission (or first visit in community settings)

- Ongoing based on the clinical setting and the patient's degree of risk
- More frequently in response to any deterioration in the patient's overall condition
- Before the patient's discharge

What are key points I should remember?

- Take advantage of every patient encounter to evaluate part of the skin. Each time the patient is repositioned is an opportunity to conduct a brief skin assessment.
- Ensure adequate light. Use natural or halogen light, not fluorescent. Fluorescent light imparts a bluish tone to dark skin, making it harder to see skin changes.
- Use an additional light source, such as a penlight, to illuminate hard-to-see skin areas, such as the heels or sacrum.
- Inspect the skin under and around medical devices (e.g., tubing, splints, compression stockings) at least twice daily for signs of pressure-related injury on the surrounding tissue. Conduct more frequent assessments in patients vulnerable to fluid shifts and in those exhibiting signs of localized or generalized edema.
- Remember that you can combine the skin inspection with other assessments.

How do I do the assessment?

- Explain to the patient and family that

What to include in every skin assessment

A comprehensive skin assessment should include the following:

Skin color

- Know the patient's normal skin tone so that you can evaluate changes.
- Look for differences in color between comparable body parts, such as left and right legs.
- Depress discolored areas to see if they blanch.
- Check for redness or hyperpigmentation (areas of skin that are darker than surrounding areas), which may indicate infection or increased pressure.
- Look for paleness, flushing, and cyanosis.
- Remember that changes in coloration may be particularly difficult to see in darkly pigmented skin. It's not always possible to identify redness on darkly pigmented skin, so localized heat, edema, and change in tissue consistency in relation to surrounding tissue (e.g., induration [hardness]) are important indicators of early pressure damage to the skin in patients with darker skin.

Skin temperature

- Use the back of your hand to assess skin temperature for coolness or warmth.
- Compare symmetrical

body parts for differences in temperature.

Edema

- Determine if edema is unilateral or bilateral.
- Grade pitting edema by firmly applying pressure in the edematous area for 5 seconds, then releasing the pressure. The grade is based on the indentation that remains in tissues:
 - 1+ (mild): 2-mm depression, barely detectable; immediate rebound
 - 2+ (moderate): 4-mm deep pit; a few seconds to rebound
 - 3+ (severe): 6-mm deep pit; 10 to 12 seconds to rebound
 - 4+ (very severe): 8-mm very deep pit; more than 20 seconds to rebound.

Turgor

- Keep in mind that poor skin turgor is sometimes found in patients who are older, dehydrated, or edematous or who have connective tissue disease.
- To assess skin turgor, pinch the skin near the clavicle or forearm so the skin lifts up from the underlying structure; then let the skin go.
- If the skin quickly returns to place, skin turgor is

normal.

- If the skin does not return to place but stays up, it's referred to as "tenting," which is abnormal.

Moisture

- Touch the skin to see if it's wet or dry, or has the right balance of moisture.
- Check if the skin is oily.
- Look for water droplets on the skin and check if the skin is clammy.
- Determine whether these characteristics are localized or generalized.
- Note any odors.

Skin integrity

- Look to see if the skin is intact, without cracks or openings.
- Determine whether the skin is thick or thin.
- Look for bruising and signs of pruritus (itching) such as excoriations from scratching.
- Check for lesions and, if present, whether they're raised or flat.
- Note disruptions in the skin. If a skin disruption is found, identify the type of skin injury.
- Assess for change in tissue consistency in relation to surrounding tissue.
- Ask the patient if he or she is experiencing discomfort, pain, itching, tingling, or numbness.

you will be looking at his or her entire skin and explain the purpose—to identify potential problems.

- Perform the assessment in private.
- Minimize exposure of body parts during the skin assessment.
- Conduct a systematic, head-to-toe as-

essment, with particular focus on skin overlying bony prominences, such as the sacrum, ischial tuberosities, greater trochanters, and heels. Check skin folds, between fingers and toes, and under and around medical devices for skin integrity.

Weekly skin assessment

You can **download this tool** from the *Wound Care Advisor* website.



Skin Integrity Assessment Form
Skin inspection every shift for high-risk patients (score ≥ 8) and daily inspection for all others

Date: _____	Time: _____	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">1 Rash <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> <td style="width: 50%;">5 Wound or lesion <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> </tr> <tr> <td>2 Edema <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> <td>6 At-risk area <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> </tr> <tr> <td>3 Bruising <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> <td>7 Incision/recent surg <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> </tr> <tr> <td>4 Pressure ulcer <input type="checkbox"/> New <input type="checkbox"/> Chronic</td> <td><input type="checkbox"/> None Apparent</td> </tr> </table>	1 Rash <input type="checkbox"/> New <input type="checkbox"/> Chronic	5 Wound or lesion <input type="checkbox"/> New <input type="checkbox"/> Chronic	2 Edema <input type="checkbox"/> New <input type="checkbox"/> Chronic	6 At-risk area <input type="checkbox"/> New <input type="checkbox"/> Chronic	3 Bruising <input type="checkbox"/> New <input type="checkbox"/> Chronic	7 Incision/recent surg <input type="checkbox"/> New <input type="checkbox"/> Chronic	4 Pressure ulcer <input type="checkbox"/> New <input type="checkbox"/> Chronic	<input type="checkbox"/> None Apparent	<table border="0" style="width: 100%;"> <tr> <td>Circle Stage: 1 2 3 4 Unstageable</td> <td>sDTI (see definitions on reverse)</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Drsg D&I <input type="checkbox"/> Drsg Chg/Location:</td> </tr> <tr> <td colspan="2">Wet-Dry Hydrocolloid Transparent Foam Alginate Other: _____</td> </tr> </table>	Circle Stage: 1 2 3 4 Unstageable	sDTI (see definitions on reverse)	<input type="checkbox"/> Drsg D&I <input type="checkbox"/> Drsg Chg/Location:		Wet-Dry Hydrocolloid Transparent Foam Alginate Other: _____											
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(continued on next page)

- Include the factors detailed in *What to include in every skin assessment*.
- Document the findings of all skin assessments for communication and tracking. You can download a *Weekly skin assessment* form [here](#). (See *Weekly skin assessment*.)

Protecting your patients

A comprehensive skin assessment is essential to detecting early signs of skin breakdown. By using the techniques in this article, you can protect your patients from harm and ensure they receive prompt treatment for identified problems.

Weekly skin assessment

(continued from previous page)

Pressure Ulcer Definition

Localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction. A number of contributing or confounding factors are also associated with pressure ulcers.

Pressure Ulcer Stages

Suspected Deep Tissue Injury:

Purple or maroon localized area of discolored intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, warmer or cooler as compared to adjacent tissue

Further description:

Deep tissue injury may be difficult to detect in individuals with dark skin tones. Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar. Evolution may be rapid exposing additional layers of tissue even with optimal treatment.

Stage 1:

Intact skin with non-blanchable redness of a localized area usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its color may differ from the surrounding area

Further description:

The area may be painful, firm, soft, warmer or cooler as compared to adjacent tissue. Stage 1 may be difficult to detect in individuals with dark skin tones. May indicate "at risk" persons (a heralding sign of risk)

Stage 2:

Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough. May also present as an intact or open/ruptured serum-filled blister.

Further description:

Presents as a shiny or dry shallow ulcer without slough or bruising.* This stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration or excoriation.

Stage 3:

Full thickness tissue loss. Subcutaneous fat may be visible but bone, tendon or muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunneling.

Further description:

The depth of a stage 3 pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and stage III ulcers can be shallow. In contrast, areas of significant adiposity can develop extremely deep stage 3 pressure ulcers. Bone/tendon is not visible or directly palpable.

Stage 4:

Full thickness tissue loss with exposed bone, tendon or muscle. Slough or eschar may be present on some parts of the wound bed. Often include undermining and tunneling.

Further description:

The depth of a stage 4 pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput and malleolus do not have subcutaneous tissue and these ulcers can be shallow. Stage 4 ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon or joint capsule) making osteomyelitis possible. Exposed bone/tendon is visible or directly palpable

Unstageable:

Full thickness tissue loss in which the base of the ulcer is covered by slough (yellow, tan, gray, green or brown) and/or eschar (tan, brown or black) in the wound bed.

Further description:

Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore stage, cannot be determined. Stable (dry, adherent, intact without erythema or fluctuance) eschar on the heels serves as "the body's natural (biological) cover" and should not be removed.

Selected reference

Preventing Pressure Ulcers in Hospitals: A Toolkit for Improving Quality of Care. AHRQ Publication No. 11-0053-EF, April 2011. Agency for Healthcare Research and Quality, Rockville, MD.

Nancy Morgan, cofounder of the Wound Care

Education Institute, combines her expertise as a Certified Wound Care Nurse with an extensive background in wound care education and program development as a nurse entrepreneur.

Information in *Apple Bites* is courtesy of the **Wound Care Education Institute (WCEI)**, © 2015.

CASE STUDY: Early detection and treatment quickly resolves a deep tissue injury

By Todd Zortman, RN, WCC, and James Malec, PhD



Pressure ulcers are a chronic health-care burden for both patients and providers. Over 2.5 million patients in the United States are affected annually by pressure ulcers, with nearly 60,000 of those cases directly resulting in death. From a provider's perspective, the cost of individual care ranges anywhere from \$500 to \$70,000 per pressure ulcer, which translates to annual costs in the U.S. approaching \$11 billion.

Many of the complications caused by pressure ulcers occur with the most serious types—those in the stage III and IV category, which includes full-thickness skin and tissue loss. Frequently, stage III/IV pressure ulcers are a direct result of deep tissue injuries (DTIs). DTIs are caused by damage of subcutaneous tissue under intact skin due to pressure or shear that compromises tissue perfusion. The deeper the tissue injury, the more likely it will progress to a stage III/IV pressure ulcer.

Since DTIs commonly present superficially and progress rapidly, early identification and treatment are important to reduce risk of complications. But early identification is challenging because of the delay between occurrence of a DTI and its appearance on the skin's surface. And until

recently, early interventions have been limited to off-loading and good skin care.

This case study demonstrates how two new technologies (infrared scanning with the WoundVision Scout™ and noncontact low-frequency ultrasound provided by MIST Therapy®) can be used to identify and resolve DTIs even in high-risk patients.

A challenging patient

Mr. Johnson*, a 57-year-old male who had experienced a spinal cord injury and vertebral artery dissection when he fell from a scaffold at work, was admitted to the Rehabilitation Hospital of Indiana (RHI) in Indianapolis about 8 months after his fall. His injuries resulted in tetraplegia, neurogenic bowel and bladder, frequent urinary tract infections, and orthostatic hypotension.

Mr. Johnson's admission to inpatient rehabilitation was delayed by his multiple medical problems. He was initially discharged from acute care to a skilled nursing facility, but required several acute-care rehospitalizations during the first 8 months after his injury. During his last hospitalization, he also developed a large stage IV sacral pressure ulcer, which was treated with negative pressure therapy. The ulcer was 90% healed when Mr. Johnson was transferred.

Rehabilitation admission assessment

During the admission assessment, the clinician inspected Mr. Johnson's skin closely, paying particular attention to the ulcer as well as areas at high risk for further injury. In addition to inspection and palpation, the clinician used the Scout device to scan high-risk areas, such as heels, ischial tuberosities, sacrum, and hips, to potentially identify other problem areas. The Scout device provides digital and infrared images. (See *Scouting out problems.*)

Infrared imaging revealed a "cold" spot (relative to adjacent tissue) on the right upper buttock, although no changes on the skin surface were visible to the naked eye. (See *Detecting a change.*) A repeat scan confirmed the results, identifying a new suspected DTI (sDTI), which the clinician could palpate. The area of induration on the right upper buttock was 3 × 3 cm, and the location matched the infrared-imaged sDTI. The sDTI correlated to where the bend in a cardiac chair used during hospitalization would cause pressure to Mr. Johnson's skin, so a DTI was confirmed.

Taking action

MIST Therapy is an evidence-based treatment for DTI that combines stimulation with noncontact low-frequency ultrasound (NLFU) and simultaneous application of a saline mist. Studies indicate that MIST Therapy removes barriers to healing by disrupting biofilm and reducing bacteria, inflammation, and matrix metalloproteinase 9. Treatment with MIST Therapy also enhances blood flow through vasodilation and angiogenesis, increases collagen deposition, and stimulates the release of growth factors.

Mr. Johnson had daily noncontact treatments with MIST Therapy. Therapy was

Scouting out problems

The Scout™, manufactured by WoundVision, is a noninvasive, nonradiating device that provides digital imaging for measuring wound size (length, width, surface area, and perimeter) as well as long-wave infrared scanning for measuring the thermal intensity (temperature) of an area on the body. Digital and infrared images are captured simultaneously to provide congruent anatomic and physiologic views. The images and associated data (for example, wound dimensions and temperature) can be stored in a secure online database for examination over time.



The infrared image of the wound or suspected area of damage obtained with the Scout device is compared to adjacent healthy tissue. Because the temperature of injured or infected tissue differs from that of healthy tissue, this comparison provides an index of the healing status of the wound. The infrared image may show injured tissue below the skin surface before it's apparent on visual inspection.

Detecting a change

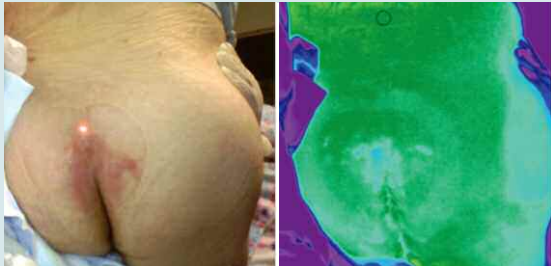
Note that the skin appears intact in the left photograph, but infrared imaging (right) reveals a suspected deep tissue injury.



Visual image (early identification) Infrared image (early identification)

Resolution of deep tissue injury

Note that neither visual inspection nor infrared imaging shows signs of deep tissue injury.



Visual image
(posttreatment)

Infrared image
(posttreatment)

limited to 2 hours two times per day, and was done in a tilt-in-space wheelchair with a ROHO cushion. Each treatment session lasted 6 minutes, with the MIST device set at 30 to 90 cm².

A barrier ointment containing balsam of Peru was applied twice daily to the buttocks and peri areas, and the patient's time in a wheelchair was limited. Mr. Johnson also got out of bed for showers and to use the bathroom as part of his bowel program.

After 3 days, repeat infrared imaging found no signs of DTI, suggesting complete resolution. (See *Resolution of deep tissue injury*.) Before discharge, Mr. Johnson completed SCI Family Training with his wife, daughter, and son-in-law. He was discharged home with family and home health care to provide respite for his working wife.

Looking to the future

In this case, the combination of early identification provided by a camera with advanced infrared technology and early treatment with NLFU allowed for quick resolution of a DTI before evidence of the problem was visible on the skin surface. This quick

action prevented an open pressure ulcer.

The discovery of Mr. Johnson's DTI illustrates that infrared scanning technology offers the possibility of routine examination of high-risk body areas in patients at high risk for occult DTIs. Early identification supports early intervention with state-of-the-science treatment technologies before the DTI becomes visible.

At RHI, we are in the process of developing a protocol for routine infrared scanning of high-risk areas in patients with mobility impairments. The goal is to identify DTIs as early as possible to limit exacerbation and shorten required treatment time. This type of protocol should also help determine the frequency of occult DTIs and whether, with early intervention, rates of pressure ulcers and rehospitalization due to DTI can be reduced over a consecutive series of patients. ■

Todd Zortman is a wound care RN/WCC and James Malec is research director at Rehabilitation Hospital of Indiana in Indianapolis.

*Patient's name is fictitious.

Images provided by WoundVision.

Selected references

- Haan J, Lucich S. A retrospective analysis of acoustic pressure wound therapy: effects on the healing progression of chronic wounds. *J Am Col Certif Wound Spec.* 2009;1:28-34.
- Haesler E., ed. National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance Prevention and Treatment of Pressure Ulcers, Clinical Practice Guideline, Cambridge Media, Osborne Park, Western Australia, 2014.
- Langemo D, Spahn J, Snodgrass L. Accuracy and reproducibility of the wound shape measuring and monitoring system. *Adv Skin Wound Care.* 2015;28: 317-23.
- Langemo D1, Spahn J, Spahn T, Pinnamaneni VC. Comparison of standardized clinical evaluation of wounds using ruler length by width and Scout length by width measure and Scout perimeter trace. *Adv Skin Wound Care.* 2015;28:116-21.

CASE STUDY:

Working under a time crunch in a short-stay facility

By Janet Wolfson, PT, CWS, CLT-LANA

After landing my dream job as the wound care coordinator at an inpatient rehabilitation facility (IRF), I found myself trying to determine how much healing could be achieved for our more challenging patients, given the constraints of reimbursement and what can be done in the typical 10 to 14 days of a patient stay.

Here's an example of how I worked with our team to help one of these challenging patients.

Mr. B arrives

Mr. B was a Medicare patient admitted to the IRF after months of hospitalization for bilateral diabetic foot ulcers (DFUs) on the plantar surfaces, diabetic neuropathy, bilateral lower extremity lymphedema elephantiasis, gangrene, bilateral fungal infection with thick fungal scale and callus from the toes to the upper calves, end-stage renal disease (ESRD), heart failure (HF), coronary artery disease, a stage IV pressure ulcer in the sacral area, acquired polymyopathy, and methicillin-resistant *Staphylococcus aureus* (MRSA).

If I had high-tech ultrasonic debriders, skin substitutes, growth factors, and 4 hours to dedicate to Mr. B each day, I knew I could have a significant impact. But a reality check focused me to think about what I could do in a few short weeks to accelerate the healing journey of

this man: What were realistic short-term goals?

Closure of his complicated wounds couldn't be the goal, so I decided that I could reduce or remove necrotic tissue or biofilm from his DFUs; disinfect and bluntly remove the thick scale and callus on his lower legs and feet that was composed of fungus, dead tissue, and other debris; prevent worsening of the pressure ulcer; and increase granulation tissue and epithelialization in his wounds.

Edema was present bilaterally, but with HF, MRSA, ESRD, and only 3 weeks before Mr. B's expected discharge, I knew I wasn't going to be able to significantly address this. After reflecting on previous successful regimens used for similar patients and consulting colleagues who are experts in wound care and lymphedema, I embarked on a plan that included patient education on lymphedema, pressure relief, diabetic foot care, and skin care. I optimized Mr. B's treatment by reviewing wound products available in our facility and adding more as needed, promoting good communication among staff stakeholders, and reaching out to the community for discharge planning.

Stakeholders step up

I knew that I alone couldn't provide everything this patient needed. I identified and sought to involve many members of our facility's wound team to maximize the benefit of Mr. B's rehab stay. Each of us had an important contribution to make.

As a certified wound and lymphedema specialist, I was the cornerstone to optimize Mr. B's wound and lymphedema care. My credentials and experience enabled me to determine the cause of his pressure ulcer and DFUs, stage them, and

Wound improvement

These photos show Mr. B's right heel condition on admission and before discharge.



Note that on admission, Mr. B right heel had eschar, as well as a thick layer of callus and scale on the periwound skin.



Note the epithelial progression and removal of nearly all eschar, in addition to the healthy periwound skin.

know the phase of wound healing for each. I removed necrotic and nonviable tissue through a series of sharp debridement of his DFUs and blunt debridement via tongue blade on the leg scales. Mr. B's wounds progressed from the inflammatory towards the proliferative phase, which increased the healing rate.

Our physicians and pharmacists addressed Mr. B's MRSA with I.V. antibiotics. The nephrologist and internist advised me that because of Mr. B's ESRD and HF, he wasn't a candidate for leg compression. The dietitian maximized Mr. B's nutritional

wound support within his disease-related dietary restrictions. The nursing staff tracked his blood glucose level and delivered medications to support wound healing; they also provided dressing changes.

All staff, from certified nursing assistants to therapists, promoted pressure relief and provided direct hygiene and skin care while teaching Mr. B so he could eventually take over his own care. The dialysis nurse positioned Mr. B on a low-air-loss mattress for pressure relief during dialysis.

The RN admission assessment had provided me with Braden scores and a body mass index so that I could order the proper durable medical equipment (DME) needed to relieve Mr. B's pressure areas. Our purchasing clerk provided the support surfaces and the appropriate bandage supplies. Timely ordering and delivery of supplies that were being used faster than normal ensured Mr. B received the treatment he needed. Access to the manufacturer's catalog allowed me to request wound cleansers, antimicrobial dressings, and high-absorbency foams to enhance Mr. B's treatment and decrease frequency of changes. Off-loading shoes allowed Mr. B. to improve his mobility while protecting his plantar ulcers.

Ready for discharge

After a bit over 3 weeks, Mr. B was ready for discharge. The short-term goals of removing necrotic tissue, reducing bioburden, and increasing granulation had been met. (See *Wound improvement*.) Because complicated wounds can take much longer to heal than a short inpatient stay allows, knowledge of local resources to keep Mr. B on a healing continuum was vital.

Mr. B left our IRF knowing his expectations for wound healing and ongoing

care. Printed instructions and pre-discharge teaching were part of this. Communicating his needs to case managers helped ensure he was put in touch with community resources. Community partners included family members, nongovernment organizations for DME funding, diabetic educators, podiatrists, wound centers, hyperbaric technicians, lymphedema therapists, infectious disease physicians, home care agencies, and support groups.

Making a difference

Because the Centers for Medicare & Medicaid Services constricts reimbursement and incentivizes quality care, facilities maximizing patient benefits while being cost effective will have the edge in the marketplace, particularly in the case of patients like Mr. B. Now is the time for each IRF facility to assess its wound care product inventory, reflect on the facility's team for provision of wound care, and expand its network in the community. Tracking readmissions within 30 days back to the acute referral source enables a facility to monitor progress. These actions can help ensure the facility can maximize patient outcomes and be a leader in the community. ■

Janet Wolfson is a wound care coordinator at HealthSouth Ocala in Florida.

Selected references

Centers for Medicare & Medicaid Services. Bundled payments for care improvement (BPCI) initiative. <http://innovation.cms.gov/initiatives/bundled-payments/>

Scarborough P. Understanding your wound care team: defining unidisciplinary, multidisciplinary, interdisciplinary, and transdisciplinary team models. *Wound Source*. 2013.

White-Chu EF, Reddy M. Wound care in short-term rehabilitation facilities and long-term care: special needs for a special population. *Skinmed*. 2012 Mar-Apr; 10(2):75-81.

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A collaborative approach to wound care and lymphedema therapy: Part 2

A multidisciplinary approach can enhance your practice and improve your patients' quality of life.

By Erin Fazzari, MPT, CLT, CWS, DWC

Have you seen legs like these in your practice?



before



after

These legs show lymphedema and chronic wounds before treatment (left image) and after treatment (right image)

with complex decongestive therapy (CDT)—the gold standard of lymphedema care. The patient benefited from multidisciplinary collaboration between wound care and lymphedema therapists.

Part 1 of this series (**published in the May-June edition**) began a discussion of the importance of multidisciplinary collaboration when treating lymphedema and chronic wounds, explained how the anatomy and physiology of the venous and lymphatic systems support this concept, and discussed the global impact of venous stasis ulcers and lymphedema. In this article, I revisit the goals common to lymphedema therapists and wound care clinicians, discuss how collaboration in multidisciplinary treatment centers can enhance patient outcomes, and describe CDT as an example of collaborative treatment.

Benefits of a collaborative treatment approach

In 2012, Birkballe et al. published a study describing the establishment, function, and results of a multidisciplinary lymphedema center in Copenhagen, Denmark. The center serves as a university hospital unit connected to the dermatology and wound-healing departments. Based on data analysis, the authors concluded the center improves lymphedema



management, knowledge, and awareness. Its staff consists of:

- two full-time nurses trained as lymphedema therapists
- two part-time physicians with extensive knowledge of dermatology and lymphedema
- hospital-based part-time staff, including dermatologists, surgeons specializing in wound care, podiatrists who treat foot and nail problems and customize footwear, orthotists, laboratory technicians, dietitians, physiologists, social workers, occupational therapists, and administration personnel.

During their first visit to the center, all patients were seen by an experienced nurse and physician. Based on the patient's individual needs and condition, other healthcare practitioners conducted additional assessments. Data analysis found all patients needed at least one additional assessment and 92% needed at least two. Patients with severe lymphedema, complications, or uncertain diagnoses received CDT in the outpatient clinic or inpatient ward. When maximal edema reduction and therapeutic benefit were achieved, patients transitioned to the second CDT phase and entered an individual follow-up program.

Birkballe et al. assert that the multidisciplinary treatment center offers these advantages:

- multidisciplinary assessment at the first visit
- easy access to relevant standardized diagnostic procedures carried out by experienced staff
- collaborative standardized treatment plans for lymphedema and complications
- better continuity of care
- improved lymphedema management, knowledge, and awareness
- greater patient adherence and satisfaction
- increased possibilities for education and

NLN: A crucial resource

The National Lymphedema Network (NLN) provides "education and guidance to lymphedema patients, healthcare professionals, and the general public by disseminating information about risk reduction and the management of primary and secondary lymphedema." NLN has published position papers on lymphedema treatment and training of healthcare practitioners. For more information, visit www.lymphnet.org.

- training of all healthcare professionals
- more opportunities for research and quality assurance
- increased awareness and improved care of patients.

Role of CDT in addressing common goals

CDT was developed by German physicians Michael and Ethel Foldi in the early 1980s to address the goals common to wound care and lymphedema therapy:

- reducing and stabilizing edema
- achieving ulcer healing
- preventing recurrence
- preventing infection
- maximizing tissue healing.

CDT should be performed by a practitioner who has had at least 135 hours of advanced training in lymphedema, according to the National Lymphedema Network. (See *NLN: A crucial resource*.) CDT consists of two phases. Phase 1, an intensive treatment phase, aims to improve skin integrity and tissue texture, reduce edema, and prevent infection. Phase 2, a maintenance phase, aims to prevent wound and edema recurrence, prevent long-term infection, and improve quality of life.

Phase 1

This phase has four components: skin and wound care, exercise, manual lymphatic drainage (MLD), and compression bandaging with multi-layered, short-

stretch bandages with foam.

When the patient's edema reduction plateaus, tissue texture improves, and wounds heal, as assessed by frequent volumetric measurements, tissue texture assessments, and regular wound assessment. Clinicians measure the affected limbs and fit them for appropriate compression garments for both daytime and nighttime compression. Compression garments may include flat-knit compression stockings, bandage alternative devices, or both. This treatment transitions the patient to phase 2.

Phase 2

During this phase, the patient receives education on edema self-management, skin care, and exercise. In some cases, as deter-

Lymphedema management has never belonged to any medical specialty.

mined by the practitioner, the patient learns how to perform MLD and uses an intermittent pneumatic compression device (IPC) at home. In about 6 months, patients should visit the clinician for reassessment and new compression garments.

A systematic review of the literature supports bundled CDT components as an effective lymphedema treatment. Multilayered compression bandaging with foam is a strong component of CDT for edema reduction. A study by Partsch et al. (2008) found a multilayered compression-bandage pressure of 38 mm Hg or higher increased blood perfusion in the normal limb. How this translates to patients with subcutaneous fibrosis with



Compression bandaging for patient with lymphedema

combined venous and lymphatic edema (phlebolymphe-
dema) isn't clear. However, the authors concluded that in the standing position, higher pressures more effectively narrow leg veins, reduce venous reflux, and enhance the venous pump. Higher pressures suggest materials with greater stiffness should be used, such as short-stretch, multilayered compression bandaging, custom flat-knit compression garments, and bandage alternative devices. Another study by Pawel et al. (2013) concluded that IPC devices, stockings, and multilayered bandaging are useful and effective in treating venous leg ulcers, whereas two-layer, short-stretch bandages and Unna boots are ineffective.

A model for the future

Literature on collaboration between lymphedema therapists and wound care clinicians is minimal. Lymphedema management has never belonged to any medical specialty, and only recently have U.S. cli-

nicians become more aware of this disorder and its management.

But that's changing. If you Google "lymphedema and wound care clinics in the U.S.," you'll find more of these clinics are being developed throughout the country. Multidisciplinary centers with collaborative teams have a place in the future of health care. Consider how a multidisciplinary setting for lymphedema and wound care could enhance your practice and improve your patients' quality of life. ■

Erin Fazzari is a physical therapist at Good Shepherd Penn Partners: Penn Therapy and Fitness, in Philadelphia, Pennsylvania.

Selected references

Birkballe S, Karlsmark T, Noerregaard S, Gottrup F. A new concept of a multidisciplinary lymphoedema center: established in connection to a department of dermatology and the Copenhagen Wound Healing Center. *Br J Dermatol.* 2012;167(1):116-22.

Farrow W. Phlebolympheidema—a common under-

diagnosed and undertreated problem in the wound clinic. *J Am Col Certif Wound Spec.* 2010;2(1):14-23.

Foldi M, Foldi E. *Foldi's Textbook of Lymphology: For Physicians and Lymphedema Therapists.* 3rd ed. Munich, Germany: Urban & Fischer, 2012.

Lasinski BB, McKillip Thrift K, Squire D, et al. A systematic review of the evidence for complete decongestive therapy in the treatment of lymphedema from 2004 to 2011. *PM R.* 2012;4(8):580-601.

Law K. Addressing the Whole, Not Just the Hole: A Collaborative Approach for Patient Success [Lecture]. Penn Medicine at Radnor, Radnor, PA; 2014.

National Lymphedema Network. Position Statement: The Diagnosis and Treatment of Lymphedema.

www.lymphnet.org/pdfDocs/nlnTreatment.pdf

National Lymphedema Network. NLN Position Statement: Training of Lymphedema Therapists.

www.lymphnet.org/pdfDocs/nlnTraining.pdf

Partsch H, Flour M, Smith PC; International Compression Club. Indications for compression therapy in venous and lymphatic disease consensus based on experimental data and scientific evidence. *Int Angiol.* 2008;27(3):193-219.

Pawel D, Franek A, Kolank M. A comparative clinical study on five types of compression therapy in patients with venous leg ulcers. *Int J Med Sci.* 2013 Dec;11(1):34-43.

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Immobility as the root cause of pressure ulcers

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

Many factors can contribute to the formation of a pressure ulcer, but it's rare that one develops in an active, mobile patient. As the National Pressure Ulcer Advisory Panel 2014 guidelines state, "Pressure ulcers cannot form without loading, or pressure on the tissue. Extended periods of lying or sitting on a particular body part and failure to redistribute the pressure can lead to ischemia and therefore tissue damage." Thus, immobility is frequently the root cause of pressure ulcer development.

As clinicians, we need to assess all patients for immobility and address the source. The goal is to modify, stabilize, or eliminate the cause of the immobility.

The goal is to modify, stabilize, or eliminate the cause of immobility.

Going beyond the basics

Clinicians typically respond to immobility with interventions designed to minimize the pressure. Interventions might include pressure redistribution products for the bed and wheelchair, elevation of the heels off the bed, and an aggressive turning and

repositioning program for the patient.

Although these interventions are appropriate and consistent with standards of practice, we must take the next step by ensuring our patients are moving as much as possible. We need to consult with occupational and physical therapists and tap into restorative nursing programs to help keep patients more active. Strategies include an exercise program that promotes strengthening, balance, stability, and endurance through such activities as lifting weights, tai chi, agility courses, pre-Pilates, boxing, walking, and kayaking.

Here are some tips for encouraging mobility.

Have patience.

Allow patients to do tasks for themselves, even if the task takes time. Even the simplest task such as brushing teeth gets the patient moving.



Monitor wheelchair use.

Encourage patients who can walk to use a wheelchair only when absolutely necessary.

For those who are wheelchair bound, encourage them to propel themselves as much as possible.

Create a mobile-friendly environment.

An environment that provides safety for mobile patients includes uncluttered hallways; handrails;



adequate lighting; nonslip, nonglare flooring that is even; and contrasting colors from floor to walls to highlight depth.

Use equipment as needed to promote mobility.



Grab bars on the bed help promote movement in the bed as well as safe egress and transfers. Keep the height of

the bed at the point where the patient's feet can touch the floor when he or she is sitting on the side of the bed and the bend at the knee is just slightly higher than 90 degrees. Use sit-to-stand or ceiling lifts to promote mobility. And remember the basics, such as properly fitted walkers and canes, grab bars in the bathroom, and an appropriate toilet seat height.

Keep patients active during the day.

Plan activity programs throughout the day. Limit napping to once a day for no more than 20 to 30 minutes.



Promote adequate sleep at night.



Limit noise at night. Use amber lighting in the evening and throughout the night to stimulate melatonin production. Implement interven-

tions, such as pressure redistribution mattress, overnight incontinence products, and heel-lift devices, to prevent pressure ulcers, which can interrupt sleep.

Ensure appropriate footwear at all times.



Be sure socks and shoes fit properly. Socks shouldn't be too tight or too loose, which could lead to slipping and subsequent friction, causing skin injury. Ensure that shoe soles aren't slippery. If the patient shuffles when he or she walks, soles need to accommodate this characteristic without excessive slipperiness.



Encourage facility staff and family members to participate.

Encourage staff and family members to participate in the exercise programs, so everyone benefits.

Going the distance

By keeping patients mobile, we can help reduce the risk of pressure ulcer formation and help our patients achieve better outcomes. ■

Selected reference

National Pressure Ulcer Advisory Panel, European Pressure Advisory Panel and Pan Pacific Pressure Injury Alliance. *Prevention and treatment of pressure ulcers: quick reference guide*. Perth, Australia: Cambridge Media; 2014.

Jeri Lundgren is president of Senior Providers Resource, LLC, in Cape Coral, Florida. She has been specializing in wound prevention and management since 1990.

Motivational interviewing: A collaborative path to change

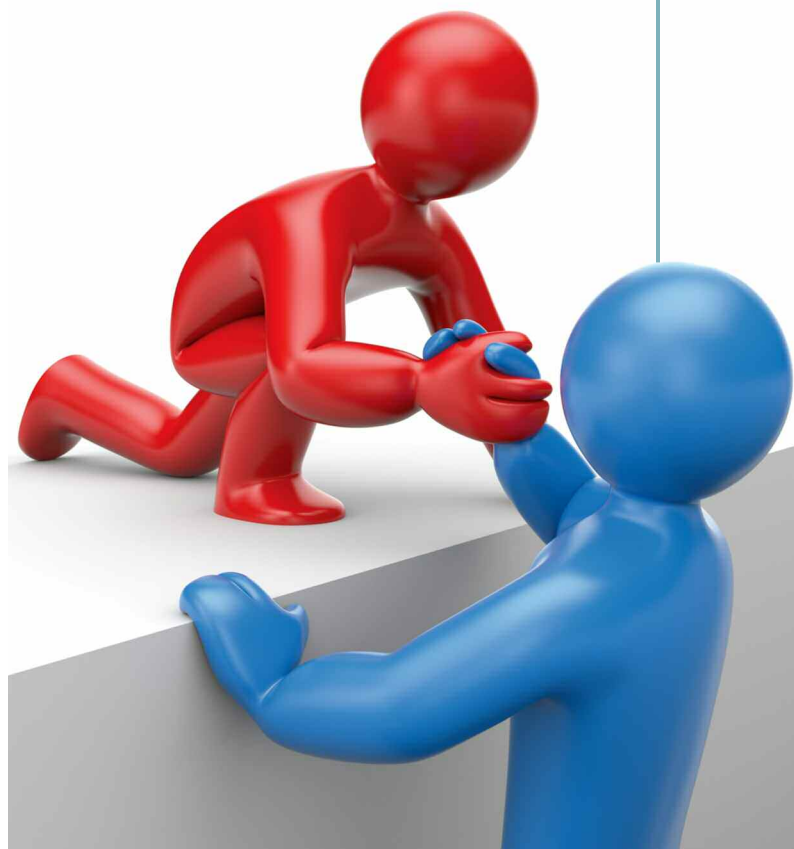
This client-centered counseling technique helps people “talk themselves into change.”

By Sharon Morrison, MAT, RN

Michael had diabetes and a history of elevated blood glucose levels. A long-time drinker, he seemed to have no interest in giving up the habit. I met him while working as a diabetes nurse educator for the Boston Health Care for the Homeless Program, traveling from shelter to shelter to help persons with diabetes set goals to improve their health.

If our meeting had taken place a decade earlier, I might have given Michael information about diabetes and talked with him about his alcohol use. I would have encouraged him to stop drinking by explaining the problems alcohol can cause for people with diabetes.

Instead, I asked him to talk about his alcohol use, including what he liked about drinking. I assured him I wouldn't tell him to stop drinking. He explained he was shy and alcohol served as a social lubricant. Also, it kept him warm on cold nights when he slept outdoors. Then I asked if there was anything he *didn't* like about drinking. He said his drinking hurt his mother, and his sister wouldn't allow him to sleep in her home if he'd



been drinking. Had I not asked these open-ended questions, I may not have been able to ferret out this important information about Michael's strong connection to his family. I knew the relationship I was establishing with him could serve as an important motivation for change—once he was ready.

When I asked Michael how much he drank each week, he said he had no idea. I told him this was important information for us to have as we worked together to gain control of his blood sugar. He was still incredulous that I wasn't going to simply tell him to stop. I asked him if he could record how much he drank in a notebook for 1 week, and then return for another meeting with me. He agreed. But he didn't come back the next week.

However, he did return a few months later. He told me that once he started keeping a record of his drinking, he was shocked by the amounts and got himself into a detoxification program. He'd been sober for 3 months.

Understanding this approach

I attribute the outcome of my interaction with Michael to motivational interviewing, a counseling approach developed largely by clinical psychologists William R. Miller, PhD, and Stephen Rollnick, PhD. Its origins lie in the treatment of alcoholics, although today it's used with patients struggling to quit smoking, lose weight, or manage such chronic diseases as high blood pressure and diabetes. Wound care clinicians may find motivational interviewing a valuable tool to use with their patients.

Miller and Rollnick describe motivational interviewing as “a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence.” The technique often is referred to as a way of “helping people talk themselves into change.”

I've found motivational interviewing to be a powerful way to interact with them, helping them make important changes leading to healthier lives. It also has allowed me to get to know clients on a much deeper level.

Using the OARS mnemonic

Motivational interviewing has four central tenets, known by the mnemonic OARS:

Open-ended questions. Open-ended questions invite people to tell their stories in their own way. What unfolds is often far more—and far richer—informa-

tion than one could imagine. Examples of open-ended questions include, “How would you like things to be different?” and “What will you lose if you give up this behavior?”

This can be quite empowering for homeless persons, who may have had precious few experiences where their input was solicited or valued. Listening carefully can help clinicians tailor the solution to a client's values and lifestyle, increasing the likelihood of behavioral change.

Here's an example of how to use open-ended questions: A patient struggling with weight loss for better diabetes control doesn't need to hear from me that certain foods are forbidden; such a direct instruction is a set-up for failure. Instead, I might ask the patient to tell me what she eats in a typical day. I would focus my questioning to bring out the significance of food as a means of comfort and try to find out what kinds of food are available in the shelter. Then I'd work to come up with a plan to change portions or gradually move the patient toward foods that could improve her blood glucose control.

Affirmation. Affirmations are statements that affirm people's experiences and help them see their own strengths. They must be genuine and proportional to the person's accomplishment. Examples include: “You showed a lot of resilience when you resisted the urge to _____” and

“I wonder how you found the strength to _____.” An affirmation differs from praise; the latter implies judgment.

Reflective listening. When clinicians listen reflectively and then paraphrase for the patient what they think they've

heard, they get a chance to prevent misunderstandings. In some cases, this might require them to interpret the implicit emotions behind the patient's statements. The expectation is that the client will correct significant misinterpretations.

Summarizing. At the end of a session, the clinician summarizes what has taken place. Besides letting the patient know the clinician has been listening, summarizing can be an opportunity to include information from other sources, such as clinical knowledge or research. It may be

With motivational interviewing, patients are the experts.

a good time to restate what the patient hopes to do before the next session, if one will occur. (I always strive to schedule another session. Motivational interviewing is about building a relationship, and its effect often is cumulative.)

A spirit that informs every interaction

Breaking down a complex communication model into four basic tenets such as OARS runs the risk of reducing it to a formulaic tool. And motivational interviewing is anything but formulaic. Being trained in the technique is important, but beyond the technique and the OARS mnemonic is a spirit that needs to inform every interaction.

With motivational interviewing, pa-

tients are the experts. They know themselves and their lives better than anyone else, so they must play a large role in figuring out how to effect change. The clinician's role is to help steer the conversation in certain directions, remembering that the patient is ultimately the driver.

I've found motivational interviewing effective and powerful with the homeless because it gives these largely voiceless, powerless, invisible people a voice, power, and visibility. It invites them to tell their own stories and feel listened to and empowered. It's conversational and collaborative, not prescriptive and hierarchical. If you're genuine with patients and their struggles, you build a relationship that guides you through difficult times—even when the patient is resistant or seems to have lost hope.

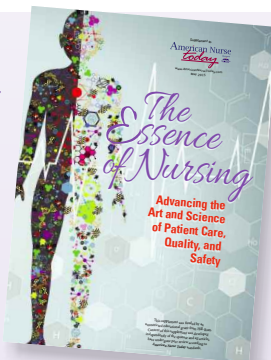
Widening the focus

One of the beauties of motivational interviewing is that it encourages clinicians to engage their patients in a more holistic examination of their lives and health. If I'd addressed Michael's elevated blood glucose levels only from the perspective of what he needed to do to lower them, he may not have done the introspection that ultimately led him to quit alcohol. Over and over, I've found motivational interviewing leads to changes for my patients that surprise and delight even an old veteran like me. ■

Sharon Morrison works for Boston Health Care for the Homeless Program (BHCHP) in Boston, Massachusetts, where she has provided care in settings ranging from shelter clinics to the streets. She currently works at BHCHP's clinic at the New England Center for Homeless Veterans in Boston.

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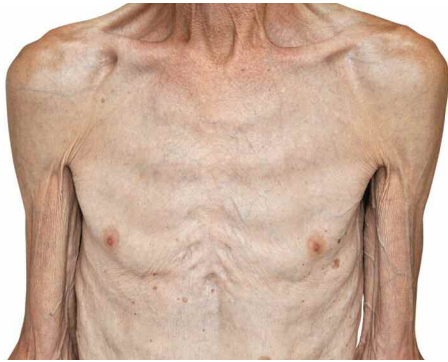
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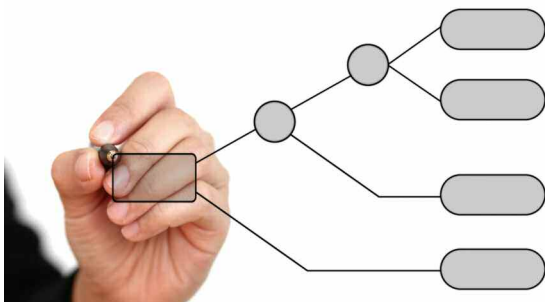


Check out these resources for your practice.



Be a nutrition champion

One in three patients enters a hospital malnourished. Fight malnutrition by viewing six short videos from the Alliance to Advance Patient Nutrition, including “Rapidly Implement Nutrition Interventions” and “Recognize and Diagnose All Patients at Risk of Malnutrition.” The videos show how to collaborate with the care team to become champions of nutrition and help improve patient outcomes. **Watch** the videos online or download them for later viewing.



Wound care treatment algorithms

Algorithms on managing arterial leg and foot ulcers, neuropathic ulcers, pressure ulcers, skin at risk, and venous ulcers can help in mapping a plan of action for pa-

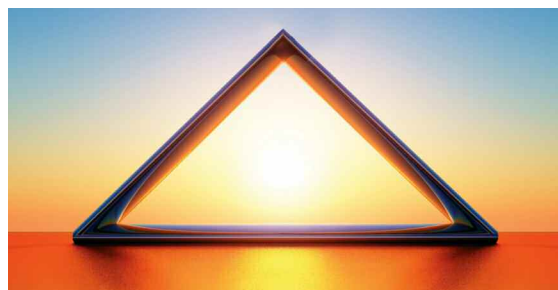
tients. The algorithms from ConnectEd can be downloaded as PDFs.

Prevention



Pressure ulcer prevention in nursing homes

Pressure ulcers remain a serious problem in nursing homes. “**On-Time Pressure Ulcer Prevention**,” from the Agency for Healthcare Research and Quality, is designed to help nursing homes with electronic medical records reduce the incidence of pressure ulcers. The program includes implementation and facilitator training materials, such as handouts, slides, and instructor guides.



Wound assessment resource

Assessment is key for proper management of wounds. To facilitate assessment, download “**Triangle of Wound Assessment Made Easy**,” from Wounds International. The Triangle of Wound Assessment is a new tool that divides assessment into wound bed, wound edge, and periwound skin. ■

Note from Executive Director



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

In the previous issues of *Wound Care Advisor*, I introduced you to four members of the National Alliance of Wound Care and Ostomy (NAWCO) Board of Directors. In this issue, I'll introduce you to three more. As you will see, the board is made up of professionals from many disciplines, making it a diverse and knowledgeable group.

Rosalyn "Roz" S. Jordan, RN, BSN, MSC, CWOCN, WCC, OMS

Roz has practiced as a registered nurse for more than 30 years. Her wide range of experience includes home health, acute care, and long-term care.

Currently, Roz provides education, research, and clinical problem solving in wound care. She has published many articles related to pressure ulcer management and its treatment, support surface design and technology, ostomy care, continence treatment, and bariatric management.

Roz graduated with a research degree in wound healing and tissue repair from the University of Wales in 2005. She was introduced to the Wound Care Education Institute training program and then to NAWCO by her daughter, who was following in her footsteps as a wound care nurse.

Roz's extensive experience is an asset to the NAWCO Board of Directors. She knows her membership allows her to serve the clinical community as a resource, giving her the opportunity to mentor other WCCs in their professional development. "Being a



National Alliance of Wound Care
and Ostomy®

member of this board has not only been rewarding, but an honor and privilege," Roz says. "I have witnessed the growth of well-prepared certified nurses and other health-care professionals across the nation."

Michael Richardson, RN, WCC

Michael has been a registered nurse for more than 20 years and has traveled around the country working in various nursing specialties from the emergency department to hospice care.

His involvement in telemedicine wound care ignited Michael's passion for wound care, and he became a "proud WCC" in 2004. "In 2005 I was pleased to join the credentialing committee of NAWCO and helped to format the questions used in the WCC certification examination," Michael says. "It has been a pleasure to watch the WCC family grow in strength, allowing practitioners in varied settings the opportunity to become wound care certified and enhance their careers."

In 2014, Michael joined the NAWCO Board of Directors and hopes to spend his term promoting the inclusive ideology of NAWCO, which, in turn, promotes excellence in wound care and, ultimately, patient care.

Clive Horrocks, RN, WCC

Clive has been a registered nurse since 1992, working in varied nursing specialties across the United States, including pediatrics, oncology, and renal transplantation. His focus was in the acute-care arena, working with

patients and staff in the treatment and prevention of pressure ulcers. As part of his work, he implemented a variety of successful educational and prevention programs to assist in the reduction of pressure ulcers.

In 2005, Clive became a founding member of the NAWCO certification committee, working closely with wound care practitioners from across the United States in structuring the national examination. He joined the Board of Directors in 2013.

“It is always an honor to give back to an organization whose primary purpose is to enhance patient safety and promote clinical excellence in wound care,” Clive says. “Over the years, I have had the honor to meet many wonderful WCCs who are im-

pecting patient safety by reducing harm and promoting healing on a daily basis.”

Below is the complete list of board members:

- Debbie Dvorachek—president
- Kathryn Pieper—vice president
- Carol Krueger—board member
- Ottamissiah Moore—board member
- Cheryl Robillard—board member
- Rosalyn Jordan—board member
- Andrew Joiner—board member
- Clive Horrocks—board member
- Michael Richardson—board member

I look forward to rounding out the board member introductions in the next issue of *Wound Care Advisor*.

New certificants

Below are WCC, DWC, and OMS certificants who were certified from April to May 2015.

Christine Abbate
 Donna Abele
 Robard Abraham
 Kelli Addison
 Amarilis Alba
 Anisha Alexander
 Melissa Altom
 Mercy Ameyaw
 Rosemarie Amodeo
 Pamela Angeles
 Akwa Angwafo
 Mylene Arboleda
 Sandy Arrant
 Chamarie Atkinson
 Grant Avikainen
 Shelly Babin
 Rene Babis

Lindsay Baldo
 Lisa Ballard
 Christine Bangay
 Rebecca Barker
 Emma Barnes
 Sunshine Barron
 Amber Bartlett
 Cody Barton
 Phillip Bass
 Marivic Bautista
 Judy Bazilio
 Audrey Beard
 Denise Bell
 Bjarke Bennedsen
 Wanalee Betts
 Melissa Biamonte
 Rhea Blanchard
 Susan Blizzard

Kenneth Blocher, DPM
 Diane Borchelt
 Sabrina Bowen
 Jaime Brady
 Oshaugnessye Brown
 Christina Brown
 Sara Browning
 Nicole Buller
 Cynthia Burke
 Evanna Burkett
 Lori Buzzard
 Traci Caddell
 Jennifer Cain
 Kacey Campbell
 Shannon Canne
 Kirk Carlos
 Tina Carlson
 Pamela Castle
 Hyacinth Charles
 Michele Chase
 Brenda Chiappetta
 Matthew Chigas

Mai Chin
 Iwona Chute
 RoseAnne Cockett-Fontanilla
 Melinda Conner
 Emberlyn Coston
 Ann Cronin
 Terry Crosby
 Jenny Cruz Padilla
 Carol Danehy
 Jina Davidson
 Wendy Davis
 Rhonda Davis-Begay
 Christine Dayton
 Amy Deal
 Mark Dean
 Heather Decker
 Laura Di Grazia
 Jason DiVillacci
 Sandra Dunlop
 Christina Dunn
 Connie Eickhoff
 Dalal Eid
 Jill Elders

Lisa Elliott	Bahiyiyh Henderson	Terri Lauer	Nadeen Nelson
Susannah	Anna Hertel	Susan Lauseng	Elizabeth Nesbitt
Evangelista	Kenneth Hinkleman	Angela Laws	Deborah Newman
Robly Evans Jr.	Amy Hoch	Mark Lechner	Terri Nicholson
Penni Exton	Olivia Hoffman	Hannah Ledlow	Augusta Obimpeh
Brittney Farmer	Pamela Hook	Christina Legrande	Joan O'Hare
Michael Farnham	Debra Hopkins	Claire Lemere	Rachel Omema
Tasha Farris	Michele Hornbake	Kathy Lewis	Oluwatosin Omole
Carlos Figari, MD	Mary Ruth Hunt	Linda Libretti	Ignatius
Bille Fikes	Jennifer Hutchinson	Christina Liptak	Onyewadume
Ann Fish	Agnes Iannazzo	Kimberly Long	Georgia Orr
Gia Fite	Monica Immordino	Elvia Lothrop	Jessica Overholser
Darryl Ford	Adele Inoue	Paul Luna	Joyce Oyama
Anthony Forsberg	Shari Jackson	Rebecca Lusher	Aurora Pardo Yero
Lisa Freeman	Katie Jackson	Ryan Jay Magpoc	Alan Parker
Allison Frieden	Michelle James	Kristine Malcomson	Matthew Passalacqua
Melissa Gambini	Jessica Jannette	Jessica Mangus	Jeffery Patajo
Mary Gardner	DeAnn Jensen	Tanya Margelowsky	Sarah Pearce
Irma Gehrung	Sally Jewell	Megan Marion	Kristin Pearson
Joanne Gellner	Allison Jimenez	Cynthia Martin	Maricon Pepingco
Josephine Gleason	Alison Johns	Heather Martin	Tracy Permenter
Teresa Golec	Jill Johnson	Melissa Martinez	Annette Plato
Robin Gooding	Kara Johnson	Lieane McArdle	Barbara Podzielny
Celia Goughenour	Cathleen Johnson	Alexis McDermott	Melissa Pollard
Michele Gramens	Gilberto Juarez	Steve McGhee	Crystal Pound
Joann Grant	Ewa Kaady	Michelle McGraw	Pamela Powell
Amber Green	Anabony Katsikakis	Tara McKenzie	Shawonna Prendergast
Sandra Green	Frank Kaydo	Alisha Mcvay	Kirsten Presby
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Jill Griffin	Patti Kelly	Brandi Minter	Melissa Pruett
Jennifer Griffith	Jennifer Kennedy	Rebecca Misner	Susan Pryor
Carol Grinnell	Maram Khabbaz, MD	Derric Montano	Mary Pugh
Diane Guarini	Samuella King	Gisela Moran	Viben Quizon
Amethyst Guillermo-	Shelly King	Mindy Morizumi	Kristie Rabideau
Malacas	Pamela King	Tamara Moseman	Brandy Radford
Jessica Hamilton	Amanda Kittle	Heather Mullenberg	Jonathan Raynor
Sonya Hancock	Christina Klawinski	Jennifer Muma	Kristi Reavis
Sonya Hancock	Lacey Knight	Erin Murrell	Virginia Rehm
Joseph Harmes	Denise Kreuzer	Pamela Nail	Danielle Reusch
Julie Harris	Naveen Kumar, MD	Joesette Nance	Loretta Rhoades
Recel Harris	Lauren Kurtz	Abekyelesh Nebebe	Castor Ricana Jr.
Selena Haslacker	Elizabeth Ladiana	Margaret Nechamkin	Tina Richard
Gina Heckman	Jennifer Larson	Victoria Nelson	Abra Richardson

Jamie Richardville
Carolyn Ripato
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Kristen Roller
Marielle Rone
Beth Ronning
Tracy Rosenbalm
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Deborah Webb
Laura Welch
Kelly West
Adriene Wheeler
Shelly-Ann Whittingham
Ryan Wicznerza
Cindy Willis
Whitney Wilson
Dannielle Wilson
Jennifer Wolfe
Derek Wood
Amanda Woodring
Autumn Workman
Joanna Young
Christopher Zimmer

Recertified certificants

Below are WCC, DWC, and OMS certificants who were recertified from April to May 2015.

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Dr. Maurie Markman, MD
Medical Oncologist

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.

Pamela Cromwell
cancer survivor

Christina Applegate
SU2C Ambassador



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