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PRACTICAL ISSUES IN WOUND, SKIN, AND OSTOMY MANAGEMENT


Official Journal of National Alliance of Wound Care
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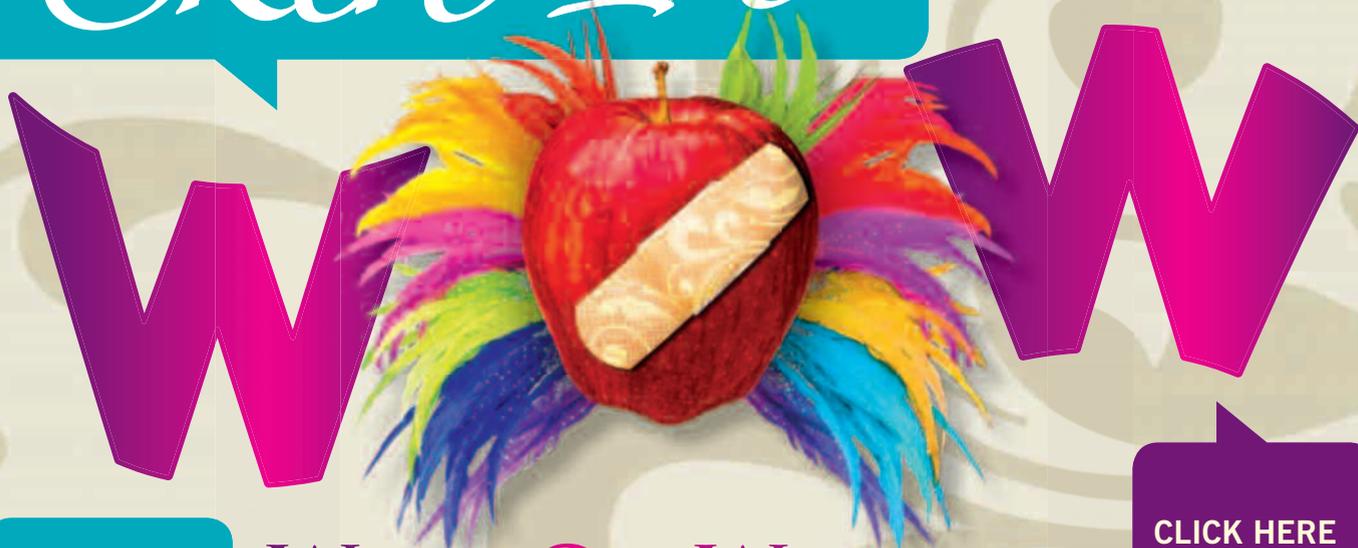
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Device-related pressure ulcers: Avoidable or not?

A medical device-related pressure ulcer (MDRPU) is defined as a localized injury to the skin or underlying tissue resulting from sustained pressure caused by a medical device, such as a brace; splint; cast; respiratory mask or tubing; tracheostomy tube, collar, or strap; feeding tube; or a negative-pressure wound therapy device. The golden rule of pressure ulcer treatment is to identify the cause of pressure and remove it. Unfortunately, many of the medical devices are needed to sustain the patient's life, so they can't be removed.

But does that mean MDRPUs aren't avoidable? Yes—and no. Some aren't avoidable, but not as many as you might think. Many result not from the device itself but from poor device positioning or securement. Some result from simple failure to check under the tubing or device. These causes are avoidable. Preventive practices include frequently evaluating device positioning and securement. Also, if possible, loosen the device at least once per shift to check for skin problems.

The National Pressure Ulcer Advisory Panel has created four “Best Practices for Prevention of Medical Device-Related Pressure Ulcers” posters, which can be **downloaded** for free. Besides a general poster, you'll find posters for the specialties of critical care, pediatrics, and long-term care. Each poster features photos of MDRPU-related injuries and prevention strategies such as:

- Choose the correctly sized medical device for the individual.
- Cushion and protect the skin with dressings in high-risk areas.

- Remove or move the device daily to assess skin.
- Avoid placing the device over the site of a previous or existing pressure ulcer.
- Educate staff on the correct use of devices and prevention of skin breakdown.
- Be aware of edema under the device and the potential for skin breakdown.
- Confirm that the device isn't placed directly under a patient who's bedridden or immobile.

Of course, even when caregivers focus on prevention, mistakes can happen. Unfortunately, mistakes are a part of life. But that doesn't mean we can't learn from our mistakes to better protect our patients. When a mistake occurs, determine what happened, correct it, and take steps to prevent it from happening again. That's our job as clinicians and as patient advocates.

A handwritten signature in black ink that reads "Donna Sardina". The script is cursive and fluid.

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Selected references

Black JM, Cuddigan JE, Walko MA, Didier LA, Lander MJ, Kelpel MR. Medical device related pressure ulcers in hospitalized patients. *Int Wound J*. 2010;7(5):358–65.

Fletcher J. Device related pressure ulcers made easy. *Wounds UK*. 2012;8(2). www.woundsinternational.com/pdf/content_10472.pdf. Accessed June 23, 2014.



Aspirin inhibits wound healing

A study in the *Journal of Experimental Medicine* describes how aspirin inhibits wound healing and paves the way for the development of new drugs to promote healing.

The authors of “**12-hydroxyheptadecatrienoic (12-HHT) acid promotes epidermal wound healing by accelerating keratinocyte migration via the BLT2 receptor**” report that aspirin reduced 12-HHT production, which resulted in delayed wound closure in mice. However, a synthetic leukotriene B₄ receptor 2 (BLT2) agonist increased the speed of wound closure in cultured cells and in diabetic mice.

The study suggests that BLT2 agonists may accelerate wound healing, particularly for intractable wounds such as diabetic ulcers.



FDA approves new drug for skin infections

The U.S. Food and Drug Administration (FDA) has **approved** Dalvance (dalbavan-

cin), a new antibacterial drug used to treat adults with skin infections.

Dalvance is indicated for the treatment of acute bacterial skin and skin-structure infections caused by certain bacteria, such as *Staphylococcus aureus* (including methicillin-susceptible and methicillin-resistant strains) and *Streptococcus pyogenes*. The drug is administered I.V., and the most common adverse effects are nausea, headache, and diarrhea.

Dalvance is the first drug designated as a Qualified Infectious Disease Product (QIDP) to receive FDA approval. Under the Generating Antibiotic Incentives Now title of the FDA Safety and Innovation Act, Dalvance was granted QIDP designation because it's an antibacterial or antifungal human drug intended to treat serious or life-threatening infections.



NPWT has positive effects for high-risk surgical incisions

“**Value of incisional negative pressure wound therapy** (NPWT) in orthopaedic surgery,” a review article in *International Wound Journal*, reports that application of NPWT on high-risk closed surgical incisions after total ankle replacement or calcaneal fracture repair prevents hematoma and wound dehiscence. NPWT also decreased swelling, pain, and healing time.

Other effects of NPWT included decreased infection and wound-healing

problems after acetabular fracture repair, and reduced incidence of postoperative seroma and improved wound healing after total hip arthroplasty.

The authors conclude that incisional NPWT “can help to reduce risk of delayed wound healing and infection after severe trauma and orthopaedic interventions.”



Treatment with insulin and metformin increases mortality risk

Patients with diabetes who take insulin and metformin, versus insulin and a sulfonylurea, are at increased risk for non-fatal cardiovascular outcomes, such as stroke, and mortality, according to a study in *JAMA*.

The authors of “**Association between intensification of metformin treatment with insulin vs sulfonylureas and cardiovascular events and all-cause mortality among patients with diabetes**” studied 178,341 patients. Among these patients, 2,948 added insulin and 39,990 added a sulfonylurea; the mean follow-up after the change in therapy was 14 months.

Complication rates after ostomy surgery are high

“**Complication rates of ostomy surgery are high and vary significantly between hospitals,**” in *Diseases of the Colon & Rectum*, included



4,250 patients who underwent ostomy creation surgery.

The unadjusted morbidity and mortality rates were 43.9% and 10.7%. Risk-adjusted morbidity rates varied significantly among the 34 hospitals participating in the Michigan Surgical Quality Collaborative, ranging from 31.2% to 60.8%.



Proactive program may reduce lymphedema risk

According to a study in the *Annals of Surgical Oncology*, a proactive education and behavioral program focused on self-care strategies may reduce the risk of lymphedema in breast cancer survivors. The strategies promote lymph flow and optimize body mass index (BMI).

“**Proactive approach to lymphedema risk reduction: A prospective study**” included 140 patients who participated in The Optimal Lymph Flow program; 134 completed the study. Most patients (97%) had improved their preoperative limb volume and BMI at the end of the study, which was 12 months after cancer surgery. Four patients

had measureable lymphedema; in two of them, limb volume returned to the preoperative level without compression therapy but with the maintenance of the exercises to promote daily lymph flow.



SCHD effective for pressure ulcers

Silver-containing hydrofibre dressing (SCHD; Aquacel® Ag) is a safe, effective, and easy-to-apply treatment for pressure ulcers and may eliminate the need for antibiotic therapy, according to a study in *Wound Medicine*.

The authors of “**Effective management of pressure ulcers using Hydrofibre technology with silver ions**” studied 20 patients with pressure ulcers who were treated with SCHD for 1 week. Wound bioburden decreased by 80% over the treatment period, with 60% of wounds showing no bacterial burden at the end of the study.



Study notes strategies for wound pruritus

Methods such as habit reversal, suggestions, relaxation, massage, and itch-coping programs have the potential to reduce itching, according to “**Psychological management of wound pruritus**,” a study in the *Journal of Wound Care*. The researchers con-

ducted a review of articles obtained from multiple databases.

Stoma reversal techniques studied

“**Circular closure is associated with the lowest rate of surgical site infection following stoma reversal: A systematic review and multiple treatment meta-analysis**,” in *Colorectal Disease*, included 15 studies for a total of 2,921 cases of stoma reversal. However, the study’s authors noted that, overall, the quality of the studies was poor, so that it wasn’t possible to reach any definite conclusions.



Pressure ulcers reduce QOL in patients with SCI

A study in the *Journal of Wound Care* reports that pressure ulcers have a negative effect on the health-related quality of life (QOL) and self-esteem of patients with traumatic spinal cord injury (SCI).

“**Quality of life and self-esteem in patients with paraplegia and pressure ulcers: A controlled, cross-sectional study**” included 120 patients evenly distributed between those with pressure ulcers and those without. The researchers used the generic Medical Outcomes Study 36-Item Short Form Health Survey (SF-36) questionnaire and the Rosenberg Self-Esteem/UNIFESP-EPM Scale to assess patients. Patients with SCI who had pressure ulcers had significantly lower scores on both scales compared to those with no pressure ulcers. ■

Creating an effective care plan

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

The development of a care plan related to skin integrity can be challenging for any clinician. It takes a strong understanding of skin integrity risk factors and knowledge of how to modify, stabilize, and eliminate those risk factors. This article provides tips for the care-planning process.

Establish goals

A skin integrity care plan starts with a comprehensive risk assessment and skin inspection. (For more information, refer to **What is a comprehensive risk assessment?** in the May/June 2014 issue of *Wound Care Advisor*.)

Once the risk assessment is complete, all identified risk factors or skin concerns should be brought forward to the plan of care. Now it's time to determine the goal. Ensure the goal is measurable; for example, "The skin will remain intact during the patient's stay" or "The pressure ulcer on the coccyx will show signs of healing, such as a decrease in dimension size and filling in of the wound base in 2 weeks."

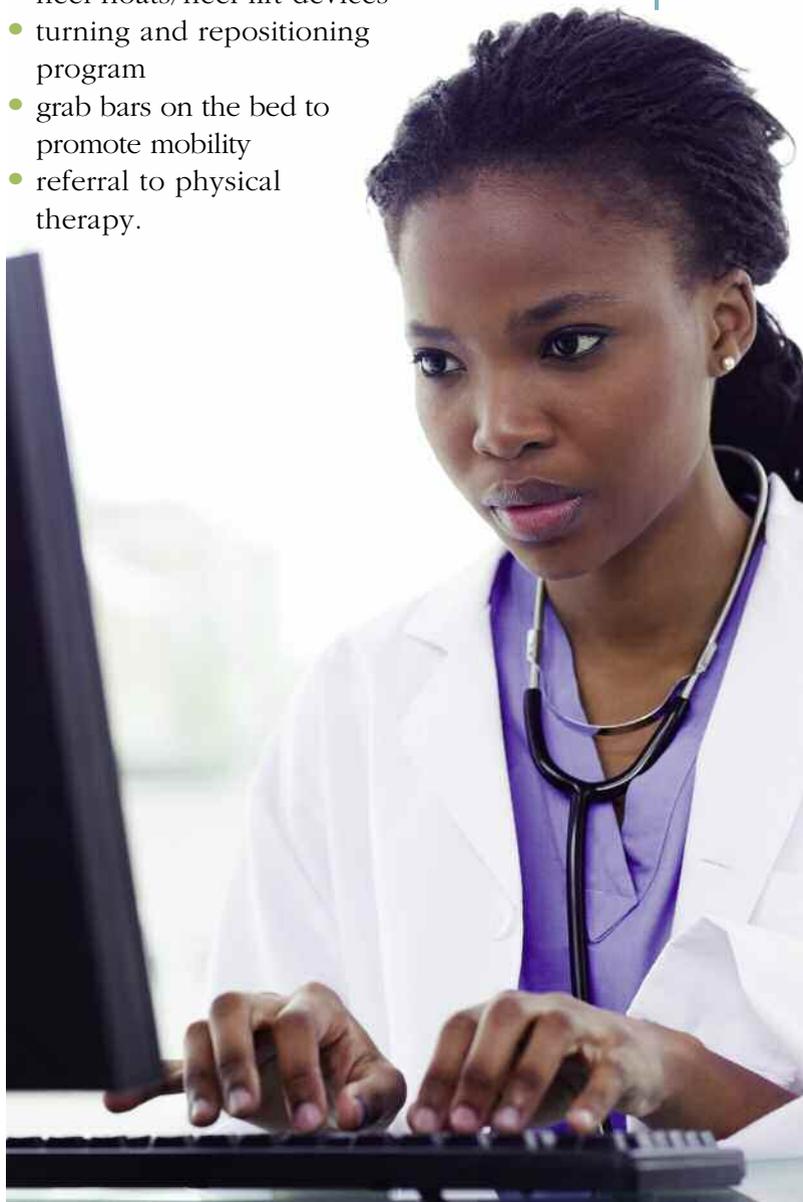
You also want to ensure the goal is realistic. For example, you don't want to state that an arterial wound with no circulation will heal in 3 months. Instead, your goal may be that the arterial wound will remain stable.

Select interventions

After you establish the goal, you're ready to develop the interventions. Correlating

the interventions to the identified risk factors is key, but given the multitude of possible interventions, this can seem overwhelming. One solution is to develop a suggestion sheet of potential interventions for common risk factors. For example, for the risk factor of immobility, potential interventions might include:

- pressure redistribution surface for the bed and wheelchair
- heel floats/heel-lift devices
- turning and repositioning program
- grab bars on the bed to promote mobility
- referral to physical therapy.



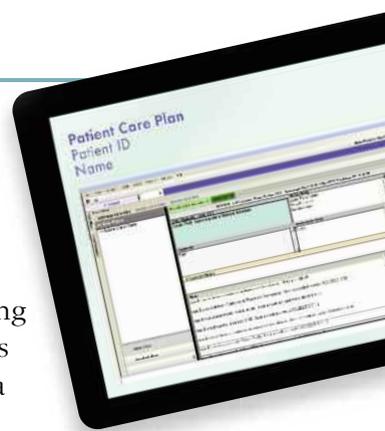
It's important to understand the root cause of risk factors to help determine the appropriate intervention. For example, if the patient doesn't want to turn and reposition because of pain (a risk factor that's known to potentially reduce mobility), you would first need to provide pain relief.

Some risk factors, such as elimination problems secondary to urinary incontinence or nutrition deficit because of loss of taste, will require their own interventions. In this case, list the risk factor under skin integrity; then, under interventions, state "See elimination problem" or "See nutritional problem." This will eliminate the risk of having conflicting interventions listed under two care-plan problems.

Make care planning less intimidating

Overall, the care-planning process can become less intimidating if you use a comprehensive risk tool with a suggestion sheet of goals and interventions to consider. Also, it's imperative to ensure all interventions listed on the care plan that need to be implemented by the nursing assistant are clearly communicated and documented on the nursing assistant assignment sheet. ■

Jeri Lundgren is vice president of clinical consulting at Joerns in Charlotte, North Carolina. She has been specializing in wound prevention and management since 1990.



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Education vital for successful wound management in the home

By Judy Bearden, MSN/ED, RN

Changes in healthcare policy and reimbursement are pushing treatment from the hospital to the community. This shift is likely to result in a higher number of complex wounds being treated in the home, which can create stress for patients and families. Education plays a key role in reducing this stress. This article focuses on education for family members or friends who are caregivers for the patient.

The basics

Keep in mind that caregivers don't need to have the same depth of knowledge as clinicians. It's best to stick to the basics, evaluate care on a regular basis, and make adjustments as needed.

Begin by asking caregivers how they learn best. For example, some want to see the wound care done and then review written information, while others prefer the reverse. Set teaching times so that all those who will be delivering care can be present.

Focus on the triad of wound care: nutrition, technique, and infection control. Teaching the basics of these three items will improve wound care outcomes and patient care.

1—Nutrition

Be sure to include the patient in discussions related to the first corner of the triangle: nutrition. Patients with wounds, especially wounds with heavy drainage, need appropriate nutrition such as additional protein to facilitate healing. Strategies to increase protein intake include:

- Give the patient supplements such as Boost®, Ensure®, or Carnation® Instant Breakfast.
- Add a spoonful of peanut butter to a chocolate-flavored Boost to increase protein and enhance flavor.
- Add frozen fruit and a small amount of yogurt to a very cold drink supplement to make it similar to a smoothie and enhance taste.
- Add protein powder to foods.
- Encourage high-quality proteins, such as peanut butter, nuts, seeds, or cheese, and avoid junk food that fills but doesn't provide much nutritional value

Patients with dietary restrictions because of conditions such as diabetes and renal conditions and patients who have difficulty swallowing require a special diet plan. Patients who have wounds should also try to eat six small meals instead of three large meals.

2—Technique

The next corner of the triangle is teaching wound care. Simple or complex wounds both require the same steps to complete a dressing change. Provide these steps to the caregiver to facilitate dressing changes.

- Step one: Gather the supplies needed, including a garbage bag for soiled dressings. Place the supplies away from the bed, but within reach.
- Step two: Wash your hands, put on gloves, and position the patient so you can best see the wound.
- Step three: Remove old dressings and put them in your garbage bag; wipe any drainage away from the wound.
- Step four: Change gloves, using alcohol to clean your hands between the glove changes, and open the new dressing supplies. Clean the wound as ordered by the physician or nurse practitioner. Measure the wounds, reapply the dressing, and cover with a 4" x 4" or abdominal pad and tape in place. Then help the patient into a more comfortable position.

3—Infection control

The last step in the triangle is to teach caregivers how to recognize a “good” (healthy) wound and one that is going “bad” (becoming infected). Remember that the simpler the directions, the better. Tell caregivers to watch for color, drainage, and odor.

Color

The inside of the wound should be beefy red, but redness outside the wound bed is a sign of infection. Frequently in home care, clinicians use a permanent marker to mark the line of redness outside of the wound to see if it's getting larger; you might want to suggest this to the caregiver.

A small amount of yellow tissue may be slough if it wipes away easily; clinicians and caregivers should note the amount and watch for increases. Black inside a wound is dead tissue and should be removed only by a professional; simply note the size of the black area.

Drainage

Any increase in drainage indicates problems. Ask caregivers to note how many layers of bandages the drainage soaks through and how many times a day the dressing needs to be changed. Drainage color should also be noted because a change in

Focus on the triad of wound care: nutrition, technique, and infection control.

color of the drainage is significant. For instance, drainage that changes from clear to yellow or green indicates infection.

Odor

Most wounds have some type of an odor; caregivers should note how far away they are when they smell the odor and under what conditions; for example, an arm's length away, after positioning the patient, or when the old dressing is removed. Wound smells can be compared to a rusty smell like blood; a smell almost like a dead animal, which indicates dying flesh; or a musty smell, which indicates the

(continued on page 19)

Using maggots in wound care: Part 1

Learn about this simple, effective, low-risk, low-cost wound debridement technique.

By Ronald A. Sherman, MD; Sharon Mendez, RN, CWS; and Catherine McMillan, BA

Maggot therapy is the controlled, therapeutic application of maggots to a wound. Simple to use, it provides rapid, precise, safe, and powerful debridement. Many wound care professionals don't provide maggot therapy (also called wound myiasis) because they lack training. But having maggot therapy technology available for patients adds to your capabilities as a wound care provider.

Knowledge of maggot biology and life history helps wound care practitioners optimize therapy and anticipate or prevent problems. Educating patients and colleagues about maggot therapy can reduce stress and simplify your life as a wound care professional, whether you're a novice or an experienced maggot therapist.

In this two-part series (the second part will appear in the November/December issue), the authors share their combined experience of more than 2,000 treatments to help you start and manage a maggot therapy service as part of a comprehensive wound care program.

Maggots as healers

The wound-healing benefits of maggots (fly larvae) have been documented for centuries. Wound care therapists have been placing maggots on wounds deliberately for at least 100 years—but flies have been depositing their larvae on wounds for at least 500 million years. That's plenty of time for maggots to perfect their ability to dissolve necrotic tissue rapidly and



stealthily without disturbing the host. (See *From fly to maggot.*)

Myiasis refers to fly larvae living on a live vertebrate host. Larvae deposition in preexisting wounds isn't always invasive. In fact, it may bring improvements in overall wound condition.

History and current status

One of the first clinicians to study and optimize maggot therapy was William

Baer, MD, chief of orthopedic surgery at Johns Hopkins Hospital in Baltimore, Maryland. After the 1931 publication of Baer's work, more than 1,000 surgeons incorporated maggot debridement therapy (MDT) into their practice; more than 90% reported being very satisfied with their experience. But by the mid-1940s, maggot therapy had nearly disappeared, at least in part due to the rise of antibiotics and the corresponding decrease in soft-tissue and bone infections.

By the late 1980s, the prevalence of antibiotic-resistant bacteria combined with the ability to keep patients with neurologic and cardiovascular impairments alive brought a resurgence in problematic soft-tissue wounds. The time was right to invite medicinal maggots back into hospitals and clinics.

Recent clinical trials irrefutably demonstrate the efficacy and safety of MDT. In fact, the pressing question for today's wound care professionals isn't "Does maggot therapy work?" but "How can I and my patients take advantage of this simple, effective, low-risk, low-cost technology?" (See *Maggot mechanisms of action*.)

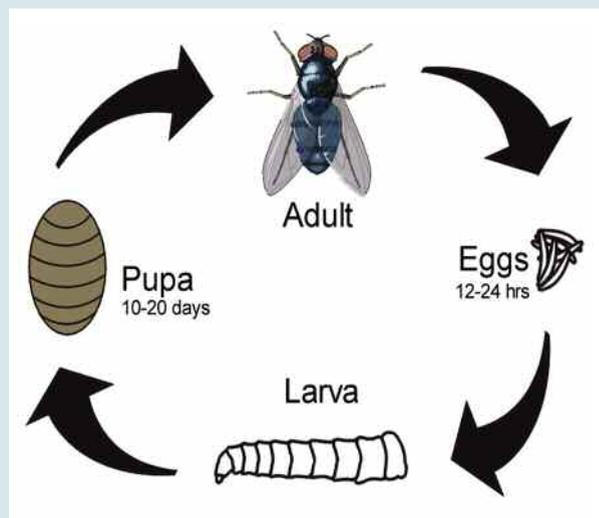
Whether using manufactured maggot-specific dressings or creating custom dressings at the bedside, clinicians have applied medicinal maggots to just about every external bodily surface imaginable except the eyes—from tiny wounds of nonhealing toe amputations to huge traumatic and burn injuries on the torso, extremities, and face; from fungating breast wounds to necrotic glans penis and resected Fournier's gangrene of the perineal, genital, or perianal regions. Maggot dressings have even been applied to joints with infected hardware, the pleural cavity (via a persistently draining thoracotomy), and the necrotic peritoneum of an open abdomen. Almost any wound with nonviable soft tissue that's open to the outside is a potential candidate for maggot therapy, although the larger and more complicated the topography,

From fly to maggot

Understanding the natural history of flies and maggots allows clinicians to use and control therapeutic maggots successfully. The fly's life cycle has four stages: egg, larva, pupa, and adult. Medicinal maggots are chosen from among the few fly species that feed exclusively on dead tissue (preferentially animal tissue).

In the wild, adult flies are attracted to dead animals, with female flies depositing their eggs on the carcass. Sometimes, flies mistake the necrotic wound of a live animal for a suitable food source and lay their eggs there (called wound myiasis). At room temperature, the eggs hatch in less than a day (sometimes within a few hours). The newly emerged wormlike larvae, called maggots at this point, secrete digestive enzymes into the environment and imbibe liquefied necrotic tissue. Lacking teeth, they don't bite. They feed for 2 to 5 days (depending on the species, temperature, and the abundance of food), after which they leave the host and wander off to find a concealed, protected spot to pupate. Within the motionless puparium (the hardened larval skin that encloses the pupa), they transform into full-grown adult flies in fewer than 3 weeks (again, depending on species and temperature).

This illustration shows the typical blowfly life cycle stages—egg, larva, pupa, and adult.



the harder it may be to confine the maggots. One caveat: Soft white, yellow, or tan slough is easy for newborn larvae to handle, whereas black dry eschar takes longer

Maggot mechanisms of action

Medicinal maggots are capable of three actions on a wound:

- debriding (dissolving necrotic tissue and debris)
- disinfecting (killing microbes in the area)
- stimulating the healing process.

Like the phases of the healing process, these actions commonly overlap and contribute to each other. Maggots' physical movements on the wound bed and the biochemical properties of their excretions and secretions produce these actions.



A 61-year-old diabetic man was hospitalized for I.V. antibiotic therapy and twice-weekly surgical debridement of a wound on his right big toe. After 3 weeks of hospitalization without improvement (left photo), maggot therapy was initiated. Three weeks of maggot therapy led to a decreased callus, decreased depth, and a smaller, clean, healthy wound bed filled with granulation tissue (right photo).

The three photos at right show a stage 3 sacral pressure ulcer with extensive undermining before maggot therapy (top photo), 4 weeks later (middle photo), and when nearly healed (bottom photo). After maggot therapy, the wound was smaller and the base was filling in with healthy granulation tissue. Because healing slowed and slough developed again, maggot therapy resumed for maintenance debridement until closure.



Photos courtesy of the BioTherapeutics, Education & Research (BTER) Foundation.

for the maggots to dissolve. Therefore, we always remove the eschar (through sharp debridement) or soften it before applying maggots. A simple autolytic dressing or, better yet, a wound gel under a hydrocolloid or thin film can be used to soften the eschar for a day or two while waiting for the maggots to arrive.

Therapeutic controls

Clinicians control or optimize myiasis so it's most advantageous to the patient.

Ways to control maggot therapy include:

- selecting species (usually *Phaenicia [Lucilia] sericata*) and strains proven to be safe and effective
- culturing contamination-free flies in laboratories
- disinfecting the maggots to remove microbes
- using quality-control assays to ensure the maggots are truly germ-free and larvae meet safety and regulatory standards.

Therapeutic controls continue at the bedside, as special dressings are used to maintain maggots on the wound during treatment.

Indications and contraindications

The Food and Drug Administration (FDA) has approved medicinal maggots for debridement of nonhealing necrotic skin and soft-tissue wounds. Commonly, such wounds include pressure ulcers, venous stasis ulcers, diabetic foot ulcers, and non-healing traumatic or postsurgical wounds. Maggot therapy also has been used successfully in burns, in hospice care, and in debriding necrotic, fungating tumors. Sometimes, maggot therapy is used in conjunction with other modalities, such as systemic antibiotics, hyperbaric oxygen, and surgical debridement (for example, in osteomyelitis or necrotizing fasciitis).

Understanding maggot dressings

Because medicinal maggots feed only on

necrotic tissue, they leave the wound when satiated or when all the necrotic tissue is gone. To prevent them from wandering away from the wound on their own, special dressings are used to confine them to the wound bed and its tributaries while letting air reach them (maggots are obligate oxygen breathers) and permitting efflux of wound exudate (maggots' digestive enzymes liquefy the necrotic tissue). These dressings basically are maggot cages; the primary cage material usually is a fabric net.

The simplest dressings to apply are pre-made maggot cage dressings (for example, LeFlap™ and LeFlap DuJour™), which confine the maggots to simple planar wounds. Baglike dressings (such as LeSoc™) are useful for covering more complicated, nonplanar surfaces, such as toes, heels, and stumps. In Europe, maggots often are placed inside bags, which are sealed and laid over the wound (such as Biobag by BioMonde®). Although this containment dressing is easier to apply and remove (as long as the bag doesn't break), studies show it leads to slower debridement, probably because the bag prevents larvae from directly accessing the entire wound bed, especially recesses and undermined crevices.

Making your own maggot dressing

While it's easier to have a premade maggot dressing of the right size and shape, knowing how to make your own dressing at the bedside prepares you to use maggot therapy to any wound in any location. Attending a workshop or watching an experienced maggot therapist is a good way to learn how to make your own maggot dressing.

Below we describe our methods, which are widely used in North America. Above all, never forget your patient's other needs—such as periwound skin protection, offloading, frequent turning, and good nutrition.

After evaluating and educating the patient and obtaining consent, we gently wash the wound (using only saline solution or water) and protect the periwound skin with a skin barrier or protectant. To keep maggots within the wound bed, we cover the periwound skin with a hydrocolloid pad or similar material. We cut the pad to surround, not cover, the wound; it then anchors the rest of the dressing. Thus, the pad functions as both a fence and a foundation on which to build the rest of the maggot cage.

For large wounds that a simple pad won't cover, cut a hydrocolloid pad into strips and apply the strips to peripheral skin like a fence. Then place the maggots into the wound bed at a dose of 5 to 10

During maggot debridement, the larvae dissolve infected, necrotic tissue.

per cm² of wound base. If you need only a few larvae, use a damp cotton swab to scoop them out. If larvae are available as maggot-impregnated gauze, simply remove the gauze from the jar and place the desired amount directly on the wound. If you need half the amount of maggots in the bottle, just use half of the maggot-impregnated gauze. If you're not applying maggots within gauze, apply saline-moistened gauze loosely on top of the wound and maggots to provide scaffolding for them to crawl about.

Next, apply a layer of netting to serve as the top of the cage. You can use the foot of a panty hose, tight netting from a fabric store, or netted contact layer dressings (such as Wound Veil). Beware, though: Stretchable fabrics may let some

of the tiny larvae escape when first applied, as larvae are less than 1 mm wide at that time. Instead, you can use a maggot-specific dressing made from fixed-weave polyester (for instance, Creature Comforts™ Polyester Net Dressing), which won't stretch. Some therapists tape the fabric directly to the periwound skin or hydrocolloid barrier, but we find that gluing it to the hydrocolloid provides a more secure dressing.

Next, apply a latex-free glue, such as Nu-Hope Adhesive or LeGlue™, directly to the hydrocolloid before placing the net atop it, and apply another adhesive layer after the net is placed down, so the adhesive layers above and below the net meet and form a strong bond through the fabric pores. Topping the adhesive layer with fabric tape or zinc oxide tape or a transparent membrane dressing provides extra

sorbent material. The material should allow air into the cage dressing below and should be changed several times daily and whenever strikethrough occurs. If no drainage occurs, the wound (and larvae) may be too dry. In that case, add sterile saline solution, water, or irrigation fluid to the cage dressing. Some therapists routinely spray the dressing lightly with saline solution every 4 to 6 hours for the first 24 hours or top the cage dressing with a moistened gauze pad instead of dry gauze so the moisture wicks into the dressing below and hydrates the larvae.

With experience, optimizing and customizing maggot dressings becomes easier and faster. For a bedbound patient whose wound won't be disturbed, you can simply ring the wound with zinc barrier paste and apply a breathable net on top to contain the maggots. Use ostomy paste to seal a crease in the skin where the hydrocolloid can't seal.

Removing the dressing

Maggot dressings generally are removed after 48 hours. By that time, most maggots are satiated and ready to leave the wound. Sometimes the dressing is left on for 72 hours, but this increases the risk of a maggot breakout, because larvae that have finished feeding will try to pry the dressing off and escape. In some cases, the dressing is removed sooner than 48 hours—for example, if the patient reports pain that analgesics can't adequately control.

Regardless of timing, the procedure for removing a maggot dressing is the same. Be prepared for fast-moving maggots trying to leave the wound as soon as you open the dressing. To make it easy to collect the larvae, place a biohazard bag around the wounded limb or tucked under the wounded buttock. Then loosen the tape and adhesives, peel back the cage dressing with one hand like a banana peel, and simultaneously wipe the maggots with a wet gauze pad in the other

Empowering patients with knowledge and control over their treatment helps decrease pain and anxiety.

security. We extend this frame peripherally over the skin for dressings at risk of coming loose due to perspiration, soiling, or nearby flexion points, as well as for highly mobile patients. Constructing this custom cage dressing is more time-consuming than using a premade maggot dressing but allows you to apply medicinal maggots to any wound that needs them, almost anywhere on the body.

During maggot debridement, the larvae dissolve infected, necrotic tissue. Of course, this material will (and must) drain out of the porous cage. So we top the cage layer with light gauze or a similar ab-

hand, sandwiching the maggots between your hands. In this way, most maggots won't be seen and won't escape. Those that manage to escape will drop into the plastic bag. If any maggots are still feeding or hiding, remove them by irrigation with water or saline solution or brush them off with a gauze pad or cotton swab. If some maggots are still holding on, simply cover them and the wound bed with a moist gauze pad. When the gauze pad is removed the next day, the last larvae will be done working and will be buried within the gauze pad.

Always discard maggot dressings in a plastic bag. Knot the top of the bag and throw it out with wound dressing waste. Double-bagging is best in case the outer bag rips from other items in the waste bin.

Applying and removing a maggot dressing sounds like a lot of work, but after you see the results of your first treatment, you're likely to deem the effort worthwhile. By your fourth application, you should be able to apply a simple maggot dressing in just 5 or 10 minutes.

Managing pain and anxiety

The most common adverse events of maggot therapy are patient discomfort and patient (or provider) anxiety. Always read package inserts carefully before starting therapy. Take steps to prevent maggots and their secretions from contacting the intact periwound skin, which is susceptible to maceration, dermatitis, and cellulitis from prolonged exposure to liquefied necrotic drainage. Also, the skin is highly sensitive to movement and pressure.

Maggots crawling over intact skin may feel like a caterpillar in the hand—tickly, itchy, or even unnerving. Most patients don't feel pain within the wound bed, although some do complain of pain, especially with dressing changes. Such patients are likely to feel pain with maggot therapy, too. When larvae are about 24 hours

old, they become large enough for the patient to feel as they crawl about the wound. Anticipate pain during maggot therapy in patients with underlying wound pain; use analgesics liberally to prevent or relieve it. Other ways to reduce pain are to administer fewer or smaller larvae (to increase the time before they can be felt) and to remove larvae early (because larvae grow larger and more active with time and are most uncomfortable when full-grown and trying to leave the wound bed).

Empowering patients with knowledge and control over their treatment helps decrease pain and anxiety. We routinely tell them that when analgesics no longer control pain to their satisfaction, we'll remove

One of the most useful educational experiences is a one-on-one conversation with an experienced colleague or a former maggot therapy patient.

the maggot dressings; all they have to do is ask. This puts them in control, reduces their anxiety, and increases their overall pain threshold. Of course, you have to make good on your promise. We ensure our patients have 24-hour access to someone who can assist immediately with dressing removal.

Occasionally, patients and therapists raise concerns about the foul odor arising as infected necrotic tissue liquefies. This is normal and generally occurs only at the start of treatment, when most of the decaying flesh is removed. Be aware that the

smell comes from the patient's fetid wound, not the maggots. Once most of the infected necrotic tissue has been removed, odor and drainage decrease dramatically or disappear altogether.

Coping with your own anxiety

Patients aren't the only ones who may experience anxiety. Maggot therapy practitioners may become anxious, too. Anxiety about maggot therapy usually stems from ignorance, so become educated about maggot therapy. A great deal of educational material is available. You can read review articles on maggot therapy to learn about the basic principles and practices of maggot therapy. Visit the website of the **BioTherapeutics, Education & Research (BTER) Foundation** and attend conferences and workshops, such as the Wild on Wounds' annual maggot therapy workshop. On its website, the BTER Foundation posts instructional videos on making custom-fit maggot dressings.

One of the most useful educational experiences is a one-on-one conversation with an experienced colleague or a former maggot therapy patient. In our practice, we encourage prospective patients to talk with previous patients. If this isn't feasible, you can have prospective patients watch video interviews of past patients.

Many benefits, few risks

Maggot therapy is similar to other wound treatments in many respects, but different in a few ways. Medicinal maggots have been subjected to controlled trials of efficacy and safety, and their production and distribution are regulated by the FDA as single-use medical devices. But unlike most other devices, they are alive and therefore highly perishable. They can't be stocked far ahead of use, and they have to be corralled during and after use.

Nonetheless, the similarities far outweigh the differences—just as the benefits of maggot therapy far outweigh the risks.

When you add maggot therapy to your wound care toolbox, you'll have more options for helping your patients. Access the many resources available to learn about maggot therapy and take advantage of every opportunity to practice your dressing skills. Finally, read this article again and again, if necessary, to help you advance quickly along your path to becoming not just a wise wound care therapist but also a skilled biotherapist.

Editor's note: For information on setting up a maggot therapy service and providing patient education, read the September-October issue of *Wound Care Advisor*. ■

Selected references

- Armstrong DG, Salas P, Short B, et al. Maggot therapy in "lower-extremity hospice" wound care: fewer amputations and more antibiotic-free days. *J Am Podiatr Med Assoc*. 2005;95(3):254-7.
- Dumville JC, Worthy G, Bland JM, et al; VenUS II team. Larval therapy for leg ulcers (VenUS II): randomised controlled trial. *BMJ*. 2009;338:b773.
- Fitzgerald RH, Armstrong DG. Palliative advanced wound care. *Vein Magazine*. 2009;2(2):44-6. www.veindirectory.org/magazine/article/palliative_advanced_wound_care. Accessed June 20, 2014.
- Horobin AJ, Shakesheff KM, Pritchard DI. Promotion of human dermal fibroblast migration, matrix remodelling and modification of fibroblast morphology within a novel 3D model by *Lucilia sericata* larval secretions. *J Invest Dermatol*. 2006;126(6):1410-8.
- Jukema GN, Menon AG, Bernards AT, Steenvoorde P, Rastegar AT, van Dissel JT. Amputation-sparing treatment by nature: "surgical" maggots revisited. *Clin Infect Dis*. 2002;35(12):1566-71.
- Marineau ML, Herrington MT, Swenor KM, Eron LJ. Maggot debridement therapy in the treatment of complex diabetic wounds. *Hawaii Med J*. 2011; 70(6):121-4.
- Markevich YO, McLeod-Roberts J, Mousley M, Melloy E. Maggot therapy for diabetic neuropathic foot wounds: a randomized study (abstr). European Association for the Study of Diabetes; 36th Annual Meeting; Jerusalem, Israel; 2000.
- Mumcuoglu KY. Clinical applications for maggots in wound care. *Am J Clin Dermatol*. 2001;2(4):219-27.
- Sherman RA. Maggot therapy for foot and leg wounds. *Int J Low Extrem Wounds*. 2002;1(2):135-42.
- Sherman RA. Maggot therapy for treating diabetic foot ulcers unresponsive to conventional therapy. *Diabetes Care*. 2003;26(2):446-51.
- Sherman RA. Maggot therapy takes us back to the

future of wound care: new and improved maggot therapy for the 21st century. *J Diabetes Sci Technol*. 2009;3(2):336-44.

Sherman RA. Maggot versus conservative debridement therapy for the treatment of pressure ulcers. *Wound Repair Regen*. 2002;10(4):208-14.

Sherman RA. Mechanisms of maggot-induced wound healing: what do we know, and where do we go from here? *Evid Based Complement Alternat Med*. 2014;2014:592419. www.hindawi.com/journals/ecam/2014/592419/. Accessed June 20, 2014.

Sherman RA, Mumcuoglu KY, Grassberger M, Tantawi TI. Maggot therapy. In: Grassberger M, Sherman RA, Gileva OS, Kim CMH, Mumcuoglu KY, eds. *Biotherapy—History, Principles and Practice: A Practical Guide to the Diagnosis and Treatment of Disease Using Living Organisms*. Springer; 2013:5-29.

Sherman RA, Shapiro CE, Yang RM. Maggot therapy for problematic wounds: uncommon and off-label applications. *Adv Skin Wound Care*. 2007;20(11):602-10.

Sherman RA, Wyle FA, Vulpe M. Maggot therapy for treating pressure ulcers in spinal cord injury patients. *J Spinal Cord Med*. 1995;18(2):71-4.

Steenvoorde P, Jacobi CE, Oskam J. Maggot debridement therapy: free-range or contained? An in-

vivo study. *Adv Skin Wound Care*. 2005;18(8):430-5.

Steenvoorde P, Jacobi C, Wong C, Jukema G. Maggot debridement therapy in necrotizing fasciitis reduces the number of surgical debridements. *Wounds*. 2007;19(3):73-8.

Tantawi TI, Gohar YM, Kotb MM, Beshara FM, El-Naggar MM. Clinical and microbiological efficacy of MDT in the treatment of diabetic foot ulcers. *J Wound Care*. 2007;16(9):379-83.

Townley WA, Jain A, Healy C. Maggot debridement therapy to avoid prosthesis removal in an infected total knee arthroplasty. *J Wound Care*. 2006;15(2):78-9.

Wayman J, Nirojogi V, Walker A, Sowinski A, Walker MA. The cost effectiveness of larval therapy in venous ulcers. *J Tissue Viability*. 2000;10(3):91-4.

Wollina U, Liebold K, Schmidt WD, Hartmann M, Fassler D. Biosurgery supports granulation and debridement in chronic wounds—clinical data and remittance spectroscopy measurement. *Int J Dermatol*. 2002;41(10):635-9.

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(continued from page 11)

presence of bacteria in the wound. The rusty smell is the best smell to uncover when it comes to wounds.

In addition to color, drainage, and odor, caregivers should know that a sign of infection is if the temperature around the wound begins to feel hot or the skin around the wound becomes hard. The patient's pain also should be decreasing, not increasing.

An individual plan

These guidelines can be enlarged on or further simplified according to the education level, experience, and willingness to learn the caregivers show. Use the questions they ask as a guideline on how much information to give them.

Building a partnership with caregivers will help reduce stress levels, raise confidence levels, reduce the risk of infection, and improve outcomes. It can also reduce calls and unnecessary visits when care-

Educational resources

Here are some resources that can be helpful for patients and their caregivers.

- **Wound management at home**, from the Visiting Nurse Healthy System, which includes symptoms of wound infection and tips for managing wounds
- **Wound care frequently asked questions**, from HealthFirst
- **Wound management: A Nurses Guide**, a **video** available on YouTube; although geared towards nurses, it may be helpful for some caregivers

givers feel confident to recognize problems and know the steps to follow when the patient's condition changes. ■

Selected reference

Dealey C. *The Care of Wounds: A Guide for Nurses*. 4th ed. Wiley-Blackwell: 2012.

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What you need to know about transparent film dressings

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

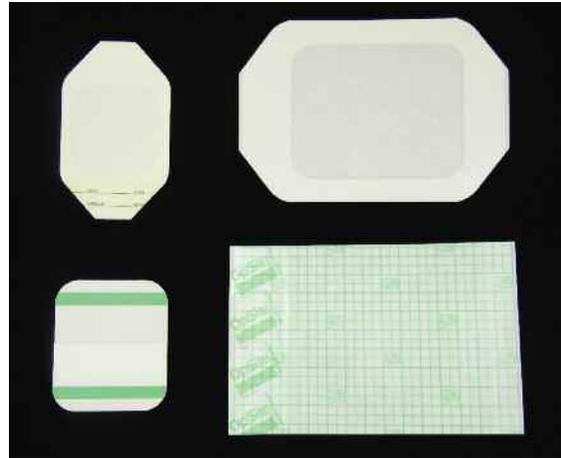
Each issue, *Apple Bites* brings you a tool you can apply in your daily practice.

Transparent film dressings are thin sheets of transparent polyurethane (polymer) coated with an adhesive. These dressings are available in a variety of sizes and shapes.

Description

Transparent film dressings provide a moist, healing environment; promote autolytic debridement; protect the wound from mechanical trauma and bacterial invasion; and act as a blister roof or “second skin.” Because they’re flexible, these dressings can conform to wounds located in awkward locations such as the elbow. The transparency makes it easy to visualize the wound bed.

Transparent film dressings are waterproof and impermeable to bacteria and contaminants. Although these dressings can’t absorb fluid, they’re permeable to moisture—allowing one-way passage of carbon dioxide and excess moisture vapor away from the wound.



Access: Examples of transparent film dressings.

Indications

Examples of when a transparent film dressing may be beneficial include:

- partial-thickness wounds with no or minimal drainage
- when protection is needed for intact skin, for example, protection of bony prominences such as elbows and heels from friction
- to promote debridement of eschar
- to protect and secure I.V. catheters
- to secure another dressing.

Precautions and considerations

Consider the following when deciding whether to choose this type of dressing:

- A transparent film dressing won’t adhere to a moist surface because its adhesive properties are deactivated by moisture.
- Don’t use this dressing in patients who

have moderate to heavy exudate, third-degree burns, suspected or active infection, fungal infection, or active herpetic lesions.

- These dressings can cause periwound maceration.
- Transparent film dressings aren't recommended for patients with fragile or thin skin, especially elderly patients, or in patients receiving steroids because removal may cause epidermal stripping or skin tears.



View: Applying a transparent film dressing

How to apply

Follow these steps to apply a transparent film dressing.

- 1 Wash your hands and put on gloves.
- 2 Remove the soiled dressing and place it in a trash bag. (Note the date on the bandage before removing it.)
- 3 Remove your gloves, wash your hands, and put on new gloves.
- 4 Clean the wound with normal saline solution or prescribed cleanser.
- 5 Dry the tissue surrounding the wound by patting it with a 4" × 4" gauze pad.
- 6 Remove your gloves, wash your hands, and put on new gloves.
- 7 Make sure the skin is clean and dry. Some manufacturers recommend defatting the skin with alcohol to increase dressing adhesion. Apply a liquid barrier film or moisture barrier to the periwound area to protect the skin from wound exudate.
- 8 For deep wounds, apply wound filler or packing material as indicated.
- 9 Peel the liner from the dressing to expose the adhesive surface.
- 10 View the wound or site through the

film and center the dressing over it.

Don't stretch the dressing during application.

- 11 Smooth the dressing in place from the center outward.
- 12 Remember that the dressing should be at least 1" larger than the wound. Check individual manufacturer recommendations because some dressings require a 2" border.
- 13 Dispose of the waste; then remove your gloves and discard them.

How to remove

Follow these steps to remove a transparent film dressing.

- 1 Lift a corner of the dressing and stretch it horizontally along the skin surface to break the adhesive bond.
- 2 Continue stretching from the edge of the dressing toward the center.
- 3 When two sides of the dressing are partially removed, grasp both sides and stretch them horizontally and parallel to the skin until the entire dressing lifts.

Frequency of dressing changes

The average time between transparent film dressings is 3 to 5 days, although the dressing may be left in place up to 7 days. The frequency of change can vary based upon manufacturer recommendations. If the transparent dressing becomes loose, if leakage is present, or new skin irritation or redness is noted, change the dressing and reassess whether continued use is appropriate. ■

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)**, copyright 2014.

Creating effective education programs on a shoestring budget

Following a few tips will leave clinicians wanting more.

By Jennifer Oakley, BS, RN, WCC, DWC, OMS

It's time again for annual staff education, and you, the certified wound clinician, need to teach the staff at your organization. You dream of staff entering a state-of-the-art classroom with computers at each station, mannequins, wound anatomy models, and enough products for each student to do hands-on demonstrations. But when you open your eyes, you're sitting in a room with ordinary tables and chairs, your laptop, a screen, a brain full of knowledge, and a very tight budget.

It can be challenging year after year to keep staff interested enough to attend these mandatory education sessions. Let's be honest: Staff are busy people. The last thing they want to do is leave all the work they need to do to come to a training session they don't think they need. They may feel they aren't learning anything new because year after year it's the same boring content being taught to them in the same boring way. To avoid that problem, you need to regularly reevaluate how you're teaching and to whom you are teaching, and think of creative ways to present the material.



How we learn

The first thing to consider when teaching staff is how to reach the adult learner. Adults learn in different ways. Some learn by listening (auditory), others by looking (visual), and some through a hands-on (tactile or kinesthetic approach). Each educational session you teach should give your attendees something to listen to, something to look at, and something to do with their hands, or some type of “hands-on” demonstration, to keep everyone involved. (See *Matching techniques to learning style*.)

In addition, consider the background and scope of practice of your audience. For example, your presentation on pressure ulcers might focus on prevention when you're speaking to nursing assistants, but focus on staging, care plan development, and treatment when your audience is a group of nurses.

Tools of the trade

It's important to ask yourself, What do I physically need in the classroom to teach the staff? Be careful, as this is where your “wants” often overtake the actual “needs.” You may not have the funds in your budget to buy that mannequin with 14 wounds and 2 stomas nor the 12 laptops for your classroom. But I bet your budget allows you to afford some fun; after all, fun is free!

Laughter has been shown to prompt dopamine release and stimulate the frontal lobe to enhance thinking. This “feel good” feeling lasts for hours, so the smile you

Matching techniques to learning style

You can incorporate various techniques into your presentation to ensure you're reaching all three types of learners.

Type of learner	Sample teaching techniques
Auditory: Prefer discussion of concepts they have heard	Lecture, discussion groups, question and answer sessions
Visual: Learn by seeing	Pictures, clip art, posters
Tactile (or kinesthetic): Learn by touching, like to perform tasks	Hands-on demonstrations

For more information on learning styles, [access this video](#). Although the setting is a college, the principles still apply.

create in the classroom carries back onto the unit and ultimately to the patient's bedside. Incorporating humor and fun into your education programs will not only keep staff coming back year after year but also build a stronger team.

You don't need the best high-end computer programs, wound models, or mannequins to teach wound or stoma assessment. You can use other budget-friendly methods to provide fun, effective education without breaking the piggy bank.

Start by jumping online. Search for free downloads that allow you to create Microsoft PowerPoint®-based games from templates in *Jeopardy* or other formats, or even make crossword puzzles. Download free pictures and clip art to capture the attention of visual learners and enhance the learning experience. Give handouts for those tactile learners to take notes on, underline, and follow along with your talk.

Enlist sales representatives for help. Frequently, they will provide free education about a product or topic and include hands-on demonstrations. Those lower-extremity wraps or negative pressure modalities are great topics for hosting a lunch-and-learn session with a sales rep. Be sure the rep understands the need to focus on education, not make a sales pitch.

You can also get creative and solve your own budget crisis by making your own training tools. (See *DIY training tools on a budget*.)

Set the stage

Next, take a look at the environment you're teaching in. Do you have enough room? Is there enough seating? How is the lighting? Will everyone be able to see and hear you?

Before your presentation, practice, prac-

tice, practice; try to have one practice session in the room where you will be speaking. Time your presentation so you know you haven't tried to pack in too much information. A way to avoid this problem is to establish one or two overall goals for the typical 60-minute presentation and build in time for questions. Think of questions that might arise so you're ready with answers. If a question comes up that you don't know the answer to, simply say, "I don't know the answer. I'll find out and get back to you."

Stay on task

During the presentation, keep focused on your agenda. If a person raises a question that's off topic, you can say that you'll talk with him or her at the break.

Remain fair and unbiased during the presentation and cite your sources for information. Always be approachable. Remember, you're the staff's source for information and if they don't feel you're approachable, they won't ask questions or

DIY training tools on a budget

Here are examples of do-it-yourself training tools you can create for little cost. Once you open your imagination, the possibilities are endless.



1 Create your own game dice. Attach foam to each side of a six-sided Styrofoam cube. Then attach photos of all six stages of pressure ulcers.

As students roll the dice, ask questions regarding stage, tissue type, treatment, and other facts.



2 Use inexpensive Crayola® Air-Dry-Clay (about \$6 for a 2.5 lb bucket) to create wound and stoma models. (The author

made a stoma model and a 14-cm x 14-cm wound model, and had clay left over.) Allow the models to dry for a day or two; then use acrylic paint and sponges to give color and texture (see progression). You're now ready to assess staff's knowledge. You can even give them scenarios on the wound or stoma and have them select appropriate treatment.



3 Stoma model created with clay



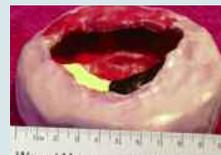
4 Finished stoma model. Participants can measure the height and size of the stoma and assess:

- color of the stoma
- lumen location
- mucocutaneous junction
- peristomal skin.

This model can also be used for learning how to properly fit and apply skin barriers.



5 Wound model created with clay



6 Finished wound model. Participants can measure the length, width, and depth; practice packing a wound;

examine different tissue types; and assess:

- undermining
- tunneling
- epibole.

Participants then document their assessment.

request clarification when they're unclear.

You also need a way to check if participants have learned the main points of the presentation. A brief verbal or written quiz in the format of a question-and-answer session will help you assess this and provides an additional opportunity for reinforcing important information.

Finally, end on time to show you respect the staff's time.

Passion for the profession

We always want staff to feel valued. Helping them stay current in their knowledge will help them keep the same passion for their profession they had when starting out in their careers. If, as the educator, you do your job well, it's likely that staff will do their job that way, too. Pay it forward with a smile. ■

Jennifer Oakley is a clinical instructor for Wound Care Education Institute.

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Confronting conflict with higher-ups

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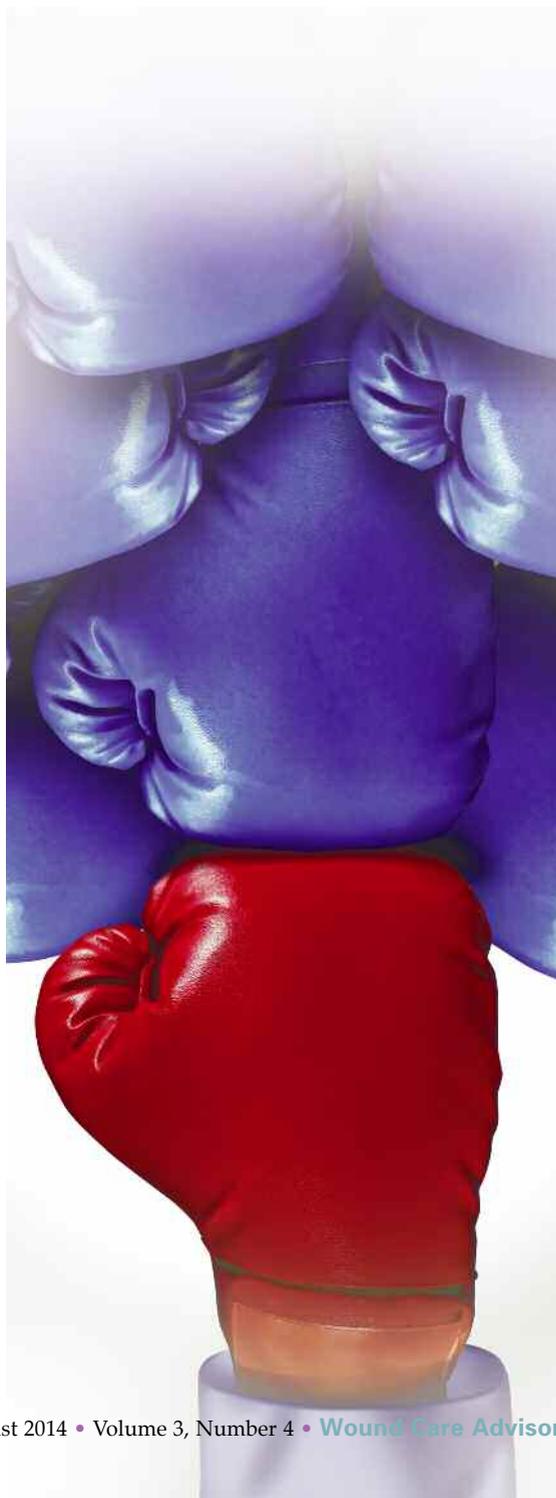
By Pam Bowers, RN, and Liz Ferron, MSW, LICSW

Conflict in the workplace is a fact of life, and dealing with it is never easy. Sometimes it seems easier to ignore it and hope it will take care of itself. But in healthcare organizations, that's not a good strategy. Unresolved conflict almost always leads to poor communications, avoidance behavior, and poor working relationships—which can easily affect patient safety and quality of care.

Much has been written about horizontal hostility and bullying and the impact on employee morale, performance, and satisfaction. But what happens when the conflict is with someone to whom you report, such as a supervisor? Or perhaps it's another higher-up—someone you don't report to directly but who can influence your job and career; for instance, a physician who's a department chair or a hospital administrator. In such cases, the power differential can pose an added challenge to confronting conflict, making it harder for you to do your job. Although intimidation can be outright, sometimes it's more subtle. Examples include being left out of meetings, receiving a less desirable schedule, or not being given important information that the rest of the team has. In smaller communities where coworkers are more likely to have social relationships

outside of work, the threat or reality of gossip or smear tactics may arise.

As research shows, fears of confronting conflict can affect clinicians no matter where they work. For example, in the United Kingdom, a 2013 survey of 8,262 nurses found that almost one-fourth had



been discouraged or warned about raising concerns around patient safety. What's more, 46% had tried to raise such concerns in the previous 6 months; of those nurses, 44% said fear of victimization or reprisal would make them think twice about reporting such issues again.

It's no wonder many clinicians view dealing with conflict directly as risky. They fear retaliation or even job loss for addressing conflicts with a manager or other higher-up. For patients, the downstream effects of conflict avoidance can be catastrophic. Conflict also can cause:

- poor team dynamics
- nothing getting resolved
- breakdown of trust
- need for workarounds
- misplaced aggression.

Addressing conflict constructively

While dealing with conflict can be risky, you have to weigh the risks of confronting it against those of avoiding it—for your patients and your own psychological well-being. We recommend a direct approach. For one thing, your leader may be unaware of your concerns or how you've been affected by workplace conflict. You need to bring these forward to make her or him aware of conflict and have the chance to address it constructively.

Another reason to bring concerns forward is to preserve your personal integrity. Without an opportunity to speak up, you can easily become passive, discouraged, and cynical and let negative feelings build. This approach compromises your job performance and team unity.

If your concern relates to an isolated or immediate incident, wait to cool down before approaching your leader so you can

present the issue in a coherent, professional way. Document your concerns in advance to help you express them more articulately and discern any behavior patterns. Request a time and place to talk that allow privacy and are convenient for

Clinicians fear retaliation or even job loss for addressing conflicts with a manager or other higher-up.

all involved. If you expect an emotionally charged conversation, consider including a union representative or someone from the human resources department or employee assistance program (EAP), to bring objectivity and help diffuse tension.

When sharing your concerns, remain professional. Be friendly but direct. Present the facts and demonstrate respect. Make sure to speak for yourself by using "I" statements, not "you" statements. Here are examples of how to present concerns in a constructive way.

Sample statement #1:

"Yesterday, when I was changing Mr. X's dressing, I felt you wanted me to rush to finish up. Do you remember that? I felt embarrassed and flustered, and I don't think those are good feelings to have when I'm working. It seemed like the task you needed me for could have waited. But perhaps I'm missing something. Am

?...I would have appreciated your waiting patiently for me. I know you're busy and have a lot going on, but it would have meant a lot to me."

Sample statement #2:

"The last few times I was in your office talking with you, I felt somewhat diminished when you took phone calls, as if our conversation wasn't important. Were you even aware of that happening? I was thinking you might not be, and that's why I wanted to bring this up. I know you have a lot of demands on your time and are dealing with important matters, but it would mean a lot to me and my working relationship with you if I had your full attention when we meet."

Listen respectfully

After you've shared your concerns, listen closely to your leader's response—and don't argue. If you can't resolve the issue, inform the other party that you'll need to go to his or her supervisor. (See *Case studies in conflict management*.) If you decide to do that, stay calm, state your concerns objectively, and be clear on what kind of resolution you want and the actions you'd like that person to take. Before the conversation ends, make sure you're both clear on the next steps and their timing. ■

Selected reference

Royal College of Nursing. Nurses need support when raising concerns. April 24, 2013. <http://thisis-nursing.rcn.org.uk/public/updates/nurses-need-support-when-raising-concerns>. Accessed October 29, 2013.

The authors work at Midwest EAP Solutions in St. Cloud, Minnesota. Pam Bowers is a nurse peer coach. Liz Ferron is a senior EAP consultant.

How to love and care for yourself unconditionally

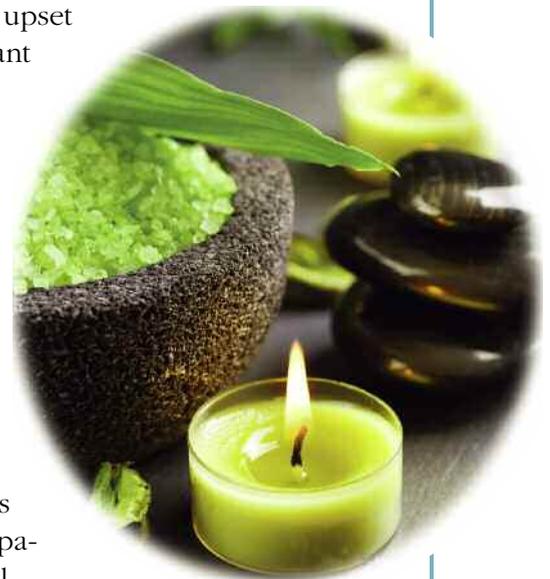
When stress brought her life to a grinding halt, the author was forced to learn how to truly care for herself.

By Yolanda G. Smith, MSN, RN, CCRN

Are you able to relax, have fun, and enjoy the simple pleasures of life? Or do you:

- have trouble falling or staying asleep?
- smoke, drink, or eat to reduce tension?
- have headaches, back pain, or stomach problems?
- get irritated or upset over insignificant things?
- have too much to do and too little time to do it?

Wound care clinicians are committed, compassionate, and conscientious about caring for patients, friends, colleagues, children, and significant others. Yet many have difficulty giving the same loving, unconditional care to ourselves, and they end up caring for others at our own expense. They're al-



ways putting oxygen masks on others, so to speak, while leaving ourselves deprived of the oxygen they need. Some clinicians may even think it's altruistic to care for others but selfish to care for oneself.

I was forced to start taking better care of myself when my mind, body, and spirit stopped me one day and said, "I can't let you continue." My typical day began at 4:00 A.M., when I'd wake up and start thinking about what I had to do. I'd get out of bed at 5:30 A.M., shower, grab a quick breakfast, and leave by 6:30.

By 8:00, I was ready to begin presenting my daylong nursing seminars. Midday, I rushed through lunch so I could get back to class before the nurses in my seminar returned from lunch break. By 4:30 P.M., my driver picked me up. By 6:30, I was in my home office reviewing medical records (I'm a legal nurse consultant). By 11:00 P.M., I was in bed.

That was my schedule the week of August 2, 2004. But on August 6 at 10:35 A.M., my life changed in a flash.

Grinding to an emotional standstill

While teaching a critical-thinking workshop with 25 nurses, I became acutely confused and disoriented with memory loss. I was emergently hospitalized at the facility where I lectured, and went through 4 days of extensive neurologic testing, laboratory work, medication therapy, and sleep. When all the test results came back negative, I was diagnosed with sensory overload.

Subsequently, I realized that while I'd been busy growing my business, I'd lacked balance in my life—focusing my attention on meeting others' needs and running my business. Ultimately, I now see, I lost my identity to my business. I neglect-

ed self-care and self-nurturing. I didn't cherish and love myself first.

Surrendering

So I surrendered. I saw that I could no longer rationalize or continue my unhealthy behaviors, and I sought to find out how to bring my life into balance. As a result, I made permanent changes in my life. I made a commitment to myself.

You have to make the decision to care for yourself.

My sensory overload incident taught me that as clinicians, we're good at managing stress at work, at home, and in our personal lives. In fact, we're so good we don't realize when we're having our own emotional reactions to stress. Stress reactions have become our norm.

To minimize stress and bring my life into balance, I learned and implemented these five essential self-care principles and practices:

- 1. Accept that self-care isn't selfish.** It's vital to our happiness and our emotional, physical, and spiritual well-being. I do something for myself every day. I begin and end my day with self-care activities, such as meditation, breathing, Reiki, a StairMaster workout, journaling, t'ai chi, prayer, dance, gratitude, and eating healthy, nutritious meals.
- 2. Manage time effectively.** Time management is essential. I decided to establish

Seven elements of a balanced life

The foundation for a balanced, integrated, healthy life hinges on the essential elements described below.

Element	Nurturing activities
Emotional and mental self.....	Get in touch with your feelings and express them more freely.
Finances	Believe you can create greater prosperity.
Intimacy.....	Experience more caring and trust in intimate relationships.
Physical body.....	Learn to love and care for your body.
Relationships	Commit to more authentic and honest communication.
Soul and spirit	Develop a vital and personal spiritual path.
Work and career	Balance the drive for success with your personal life.

Monday-through-Thursday business hours.

3. **Learn how to say no comfortably and confidently.**
4. **Set limits.** I came to see my clients' emergencies weren't my emergencies; they stemmed from their own failure to manage their time effectively. It wasn't unusual for my attorney clients to call me on Friday afternoon requesting information they needed Monday morning—which meant I'd have to work through the weekend.
5. **Live, love, and laugh every day.**

I used my experiences to develop stress management programs and a holistic self-care nursing wellness model to enlighten and empower others to live a happy, joyous life by loving themselves—mind, body, and soul. (See *Seven elements of a balanced life*.)

No one can do it for you

Self-care means eating healthy foods, im-

proving your sleep habits, gaining more control over your time, getting adequate exercise, managing your stress, dealing with clutter, and learning to say no. It's about putting yourself first and investing time and effort into your own health and well-being.

No one can do this for you. You have to make the decision to care for yourself—and then do it. You must come to realize you deserve to live a healthy, balanced life. Only you can make that happen. An internal drive born of love and compassion for yourself will empower you to implement self-care practices every day.

Planning self-care

The secret to self-care is planning. Virtually all the self-care changes I've made (including giving up fast and fried foods, caffeine, sugar, artificial sweeteners, and chocolate) came from making a plan and sticking to it.

You probably know what you'd like to improve in your own life. If I asked you to

Self-care examples

Once you've committed to caring for yourself, search for activities that make you happy. Look at all the possibilities until you find those that really move you.

Physical realm	Emotional realm	Mental realm	Spiritual realm
Take a t'ai chi, yoga, or dance class.	Breathe deeply. Inhale calm and tranquility; exhale stress and worry.	Begin your day with a positive affirmation.	Meditate with incense and candles.
Reduce your intake of caffeine, fats, and sugar.	Be proud of yourself. Acknowledge your accomplishments.	Replace negative beliefs with positive thoughts.	Practice unconditional love and forgiveness of yourself and others.
Soak in a hot bath, with candles lit and music playing.	Listen to your favorite music.	Express your thoughts and feelings in a journal.	Pray, if you're so inclined.

name your most important self-care goal, I bet one would come to mind immediately. So why haven't you done anything to reach your goal? And if you have, why haven't you stuck with the effort? The three obstacles I hear about the most are:

- "I don't know how to get started."
- "I'm too busy."
- "I can't seem to follow through with what I start."

Can you relate to any of these? How about all three? A major barrier I identified was admitting I couldn't change other people, so I let go of the desire to do this. I can't change anyone else; nor is it my responsibility to convince anyone to change. The only thing I can change is myself.

Work-life integration

The term *work-life balance* implies all aspects of your life should be in equilibrium. This suggests we're constantly juggling

to maintain a balance, and a sudden increased demand on one side throws everything off balance.

So I've shifted my focus from *work-life balance* to *work-life integration*, which implies a synergy among the various aspects of our lives, resulting in more productive energy expenditure. Work-life integration is about combining work and personal life—including family, relationships, and personal growth—in ways that are mutually supportive and rewarding. Work and personal life aren't independent aspects of life; we have to give ourselves permission to have both equally. By examining the role unhealthy beliefs and perceptions play in our lives, we can begin to reevaluate our choices and create a greater integration between our work and personal lives.

Changing your life one step at a time

Once you've identified personal barriers to

(continued on page 34)

You want to touch me where?

Using intimate touch in wound care

By Debra Clair, PhD, APRN, WOCN, WCC, DWC

Providing wound care requires a great deal of knowledge and skill. To become a wound care nurse entails taking classes, gaining and maintaining certifications, and acquiring on-the-job experience. But de-

spite your education, knowledge, skills, and certifications, you may encounter problems when wound care requires you to touch the patient in a sensitive or embarrassing area. Touching the patient in these areas is called *intimate touch*.

Intimate touch can cause feelings of discomfort, anxiety, and fear—for both you and your patient. This article offers advice on how to decrease everyone's anxiety and discomfort around intimate touch.

Initiating intimate care: The right approach

To perform a thorough assessment, you must examine all areas of the skin surface. No matter where the patient's wound is located, you're responsible for addressing it and performing the required care.

But some nurses avoid examining areas that would involve intimate touch. As for patients, many feel they have no control when receiving *any* type of health care, and may be especially uncomfortable during intimate touch.

Have you ever thought about what's most important to your patients when intimate touch is required? Interviews reveal patients want to know in advance if they will be touched and, if so, why. They'd also like to be able to choose whether a male or female nurse provides this care, as well as when this care will be performed. (See *Gender preferences*.) Being able to make these choices gives them some control, reducing their sense of helplessness.



To make patients feel as comfortable as possible, strive to create an atmosphere of privacy and remain professional and purposeful at all times. Start by explaining what you need to do. Then ask when the patient would like the care to be done (if your schedule is flexible). If possible, let the patient choose how he or she would like to be positioned and covered. Is the patient too warm? Too hot? Is she concerned about exposing a particular part of her body? Asking these questions tells patients you care and want to reduce their discomfort.

During intimate touch, the patient doesn't want an audience. If you need other healthcare providers to assist you with wound care, take only those absolutely required into the patient's room—for instance, if you'll need help moving the patient, if the patient previously made you feel uncomfortable, or if you have concerns about being alone with him or her during intimate touch. Before touching the patient, ask for permission.

I don't take nursing students into the room with me when intimate touch is required unless the patient gives permission. If the patient does give permission, I try to determine if she did so because she felt obligated or if she really doesn't mind having a student in the room. Sometimes, patients think I'll be angry if they deny permission.

Intimate touch encounters

Recently, I cared for an elderly patient who had pressure ulcers on his penis stemming from edema. He and his wife were in the room when I entered. I introduced myself and explained why I was there. I told them I would be evaluating his wounds and making decisions about care. I also explained I would be looking for signs of infection or dead tissue. I asked the couple if they had any questions and if it would be okay for me to

Gender preferences

Many hospital nurses believe more patients request female nurses than male nurses. Perhaps patients regard female nurses as nurturing mother figures and feel that intimate touch is part of this role. But in the author's personal experience, many female patients prefer male nurses no matter what type of care is needed. Some state that male nurses are more sympathetic and spend more time with them.

do this. Without hesitation, they responded "Yes."

When I evaluated the patient, I found a large amount of slough and nonviable tissue in the ulcer beds. I explained the debridement process and, with the patient's permission, debrided the ulcers. Then I made a treatment plan and wrote orders for a daily dressing change along with an order for cleaning the penis well before each application.

The next week, I returned to find the patient's penis and pubic hair covered with a large amount of crust from the daily wound gel dressing change. Obviously, the penis hadn't been cleaned regularly. When I looked into the reason, I found the nurses were uncomfortable holding the patient's penis to clean it well.

The other day, I cared for a patient who'd had an erection for several weeks

How male and female nurses feel about intimate touch

Some nurses, both male and female, worry about the perceived sexual connotations of touching a patient intimately. They worry a patient may interpret their touch as sexual and think the nurse is making an inappropriate advance. Some female nurses don't feel comfortable touching another woman in intimate places; others feel less comfortable with male patients. On the other hand, some male nurses sense that male patients don't want to be touched by another male.

but was embarrassed to tell anyone. Even though the erection was painful, he waited so long to see a urologist that penis amputation was a possibility. He'd tolerated the pain (and risked possible amputation) out of fear of having someone examine, touch, or possibly make fun of an intimate body part. These two encounters provide insight into some of the issues related to intimate touch. (See *How male and female nurses feel about intimate touch*.)

Putting knowledge into action

Now that you understand the issues around intimate touch, you're better prepared to perform it more adeptly and comfortably. Keep in mind your patients' statements or preferences about intimate touch. Watch others' behaviors during intimate touch care activities so you can deepen your knowledge base. ■

Selected references

Blas A. Nursing students learn how to handle intimate situations as they prepare for the real-life profession [monograph online]. *The Beacon*. September 29, 2011. <http://upbeacon.com/2011/09/29/the-nurses-have-the-magic-touch>. Accessed May 29, 2014.

Green C. Philosophic reflections on the meaning of touch in nurse-patient interactions. *Nurs Phil*. 2013; 14(4):242-53.

Harding T, North N, Perkins R. Sexualizing men's touch: male nurses and the use of intimate touch in clinical practice. *Res Theory Nurs Pract*. 2008;22(2): 88-102.

MacWilliams RB, Schmidt B, Bleich MR. Men in nursing: understanding the challenges men face working in this predominantly female profession. *Am J Nurs*. 2013;113(1):38-44.

O'Lynn C, Krautscheid L. Original research: 'how should I touch you?: a qualitative study of attitudes on intimate touch in nursing care. *Am J Nurs*. 2011;111(3):24-31.

Debra Clair is a wound care and hyperbaric therapy provider at Robinson Memorial Hospital Wound Care Center in Streetsboro, Ohio.

(continued from page 31)

positive self-care, you can start to change your behavior one step at a time. Now is the time to act. Set self-care goals and establish a self-care protocol. Then hold yourself accountable. Be creative. Let your inner child have fun by engaging in activities that make you feel good. (See *Self-care examples*.)

I've learned self-care is a way of life that enables me to truly love myself and to accept and respect myself for who I am. When I started practicing self-care daily, my energy soared and my mood changed. I developed an inner peace, tranquility, and calmness, plus a clarity of thought I'd never experienced before. I've learned self-care equals growth, self-love, and nurturance. I've chosen self-care and never looked back. I've completely trans-

formed my life and now live a life of balance, joy, happiness, pleasure, and wellness. I love myself mind, body, and soul, every day. ■

Selected references

Smith P. *To Weep for a Stranger: Compassion Fatigue in Caregiving*. Mountain View, CA: Healthy Caregiving, LLC; 2009.

Wicks RJ. *Bounce: Living the Resilient Life*. New York, NY: Oxford University Press; 2009.

Wicks RJ. *Overcoming Secondary Stress in Medical and Nursing Practice: A Guide to Professional Resilience and Personal Well-Being*. New York, NY: Oxford University Press; 2005.

Yolanda G. Smith is a holistic nurse educator; founder and director of Holistic Self-Care: Just for Me; and founder of Workforce Transformation, LLC. Her website is www.Selfcarejustforme.com. You may contact her at Yolanda@selfcarejustforme.com.

Consider writing an article!

Wound Care Advisor invites you to consider submitting articles for publication in the new voice for wound, skin, and ostomy management specialists.

As the official journal of WCC[®]s, DWC[®]s, OMSs, and LLESMs, the journal is dedicated to delivering succinct insights and pertinent, up-to-date information that multidisciplinary wound team members can immediately apply in their practice and use to advance their professional growth.

We are currently seeking submissions for these departments:

- **Best Practices**, which includes case studies, clinical tips from wound care specialists, and other resources for clinical practice
- **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.

If you're considering writing for us, please [click here](#) to review our Author Guidelines. The Guidelines will help you identify an appropriate topic and learn how to prepare and submit your manuscript. Following these guidelines will increase the chance that we'll accept your manuscript for publication.

If you haven't written before, please consider doing so now. Our Editorial Team will be happy to work with you to develop your article so that your colleagues can benefit from your experience.

For more information, [click here](#) to send an email to the Managing Editor.



Clinician RESOURCES

Be sure you're familiar with these valuable resources for you and your patients.

Colorectal cancer resources



Fight Colorectal Cancer has a comprehensive **resource library** for patients, including:

- a link to “My Colon Cancer Coach,” which provides a personalized report to help guide patients in making treatment decisions
- archives of webinars (past topics include healthy changes that may reduce recurrence, highlights from a GI cancer symposium, and making sense of acronyms)
- a link to the National Comprehensive Cancer Network guidelines for patients
- videos on colon cancer signs and symptoms, peripheral neuropathy, and a patient answer line
- a family history worksheet
- a newly diagnosed information card and a screening information card that can be downloaded
- newsletters from the organization.



ADA clinical practice guideline tools

The website for the American Diabetes Association (ADA) has a **special section** on Clinical Practice Recommendations. In addition to reading, searching, and downloading the recommendations, clinicians can access

- a slide presentation that contains key clinical recommendations from the ADA
- an app with the guidelines
- a position statement on the management of hyperglycemia in patients with type 2 diabetes
- a position statement on nutrition therapy for the management of adults with diabetes.

For a fee, clinicians can also order pocket cards with the clinical practice recommendations.

Carbapenem-resistant *Enterobacteriaceae* control and prevention kit

Access “**Carbapenem-resistant *Enterobacteriaceae* (CRE) control and prevention toolkit**” from the Agency for Healthcare Research and Quality. The toolkit includes how to structure a management program, best practices, how to measure the impact of interventions, and tools and resources. In



In the United States, most CRE cases are caused by the plasmid-borne *Klebsiella pneumoniae* carbapenemase (KPC) gene circulating among *Enterobacteriaceae*, most commonly among *K. pneumoniae* isolates. KPC-producing organisms have spread epidemically in the United States and around the world among hospitalized patients.

PAD patient education resource



Vascular Medicine has published “**Vascular Disease Patient Information Page: Peripheral artery disease (PAD)**.” The question-and-answer format of the resource includes risk factors, signs and symptoms, diagnosis, treatment, and prevention. ■

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Nominations for WCC® Outstanding Achievement and Scholarship Awards now open

Nominations for the 8th annual WCC Outstanding Achievement and Scholarship Awards are open until August 1, 2014. These prestigious awards are given annually to three outstanding WCCs from across the country and one qualified individual aspiring to become wound care certified.

All achievement and scholarship winners will receive travel expenses and paid registration for the 2014 Wild on Wounds (WOW) conference, where they will be recognized. WOW 2014 will be held September 17-20 at the Rio Hotel and Convention Center in Las Vegas.

Anyone may nominate an outstanding WCC for each of the three award categories and one wound care clinician for the scholarship. One form must be used for each nominee, and nominees must meet the criteria shown below. [Click here](#) to access the nomination form. Submitted forms are the sole property of NAWCO®.

Outstanding Research In Wound Care

- Contributes to the development of evidence-based wound care through research

- Collaborates with colleagues and other wound care professionals to facilitate research
- Communicates research findings through publication and presentation at professional meetings
- Demonstrates utilization of research in practice or education
- Mentors the development of other researchers

Outstanding Work In Diabetic Wounds

- Contributes to the promotion of diabetes education
- Volunteers professional time in the treatment of diabetic wounds
- Recruits/mentors other wound care professionals in the prevention and treatment of diabetic wounds
- Organizes community outreach events on the prevention of diabetic wounds
- Serves as a liaison between the healthcare setting and the community in diabetic wound care

Outstanding WCC of the Year

- Demonstrates superior expertise in the clinical practice of wound care
- Mentors and promotes the development of other wound care professionals
- Utilizes current research and evidence-based wound care literature in professional practice
- Participates actively in community outreach, wound care legislation, or professional wound care organizations
- Collaborates with other wound care professionals to promote the delivery of quality care

WCC Scholarship (sponsored by JoernsRecoverCare)

The scholarship covers the cost of the tuition for the WCEI Skin & Wound Management course and the NAWCO national certification exam fee. The individual who receives the scholarship must be a wound care professional who aspires to further his or her education in wound care by earning the WCC credential and who meets the WCC eligibility requirements as set forth by NAWCO.

NAWCO® to sponsor WOW National Conference

The National Alliance of Wound Care and Ostomy (NAWCO), the largest wound care and ostomy certification organization in the United States, is pleased to announce that it is sponsoring the annual **Wild on Wounds (WOW) national conference**, scheduled for September 17-20 at the Rio Hotel and Convention Center in Las Vegas.

WOW represents hundreds of wound care clinicians and the largest contingency of WCC® (wound care certified) professionals gathered at any wound care conference. This 3-day educational event, appropriately themed “Skin is In,” is the place where wound care clinicians, both certified and not, come together to learn best practices for today’s standards of care, reacquaint with peers, and build their own unique professional network.

WOW is growing from every direction. More than 700 practicing nurses, therapists, and physicians who influence wound care decisions from all care environments are expected. Also planned are:

- 50 basic to advanced educational sessions
- 11 how-to and hands-on programs
- renowned speakers and industry experts.

“We look forward to connecting with our current wound care certificants as well as meeting future candidates at WOW,” says Cindy Broadus, RN, BSHA, LNHA, CLNC, CHRM, WCC, DWC, OMS, executive director for NAWCO. WOW 2014 is the leading wound care conference for NAWCO’s more than 17,000 certified clinicians.

NAWCO will participate in several functions at the WOW conference, including speaking directly with hundreds of clinicians during the exhibit time and making

the highly anticipated presentation of the annual WCC Outstanding Achievement and Scholarship Awards. [Click here](#) for WOW information.



Photo: Anna Young, MakerNurse Project

WCC® ‘MakerNurse’ honored at White House

Each day, 3.1 million registered nurses around the country are “making” creative solutions to improve the lives of patients, caregivers, and even their coworkers. On June 17, Roxana Reyna, BSN, RNC-NIC, WCC, (pictured above) from Driscoll Chil-

dren's Hospital in Corpus Christi, Texas, participated as an "Honored Maker" at the nation's first White House "Maker Faire" for her creative efforts in wound care for pediatric patients.

The MakerNurse initiative, led by the Massachusetts Institute of Technology's Little Devices Lab with support from the Robert Wood Johnson Foundation, was launched in September 2013 with the goal of honoring the inventive spirit of nurses across America. Over the past 9 months, the initiative has collected stories from nurses about how they're creating solutions every day at the bedside to improve patient care. As a result, MakerNurse discovered hundreds of nurses who are reinventing their tools and materials.

At the White House Maker Faire, MakerNurse announced the launch of a new online community that will elevate and accelerate the ingenuity of nurses working across the United States. Additionally, the initiative will release a series of **robust tools and resources** to empower nurses to make and innovate at the bedside, improving patient care and health.

NAWCO® congratulates Roxana Reyna as an Honored MakerNurse who, by using innovative and creative advanced wound care techniques to eliminate the need for immediate surgery, alleviates the pain and suffering of children and infants born with their organs outside of their umbilicus. Her daily "making" also consists of preventing skin and wound care complications by modifying foam and other dressings to create a protective barrier. Reyna helps teach other nurses how to make these modifications to provide continuity of care.

Join the **MakerNurse community** (maker.nurse.org) and share your story. ■

New certificants

Below are WCC, DWC, and OMS certificants who were certified in April and May 2014.

Benjamin Adduru	Tracy Brown
Sarah Adkins	Terry Bryant
Imelda Aguila	Teresa Buckley
Angela Ahrens	Curtis Bullington
Gregory Albrecht, DPM	Monica Burger
Mary Ann Ambrose	Tina Canada
Edward Anderson	Greta Carlson
Ifeanyi Anigbo	Courtney Carroll
Heather Armenta	York Sing Chan, DO
Deborah Arnone	Karen Chandler
Michael Atkinson	Karen Christmas
Nathalie Bak	Diana Clay
Jennifer Barnhill	Laura Cole
Judy Baron-Brumant	Sara Collett
Angela Barrows	Thomas Collier
Emily Bartling	Michelle Collins
Jennifer Basford	April Collins
Sheena Battles	Josephine Cooper
Elaine Beardsley	Camille Copeland
Dallene Beltran	Kristy Crandell, MD
George Benedict	Carlen Crockett
Michael Benjamin	Diane Curren
Annette Benton	Linda Curto
Elizabeth Berg	Rong Dai
Mark Bero	Kathryn Daniels
Kelly Berry	Shalisa Davis
Mary Berry	Barbara Davis
Connie Betts	Psalmuelle De Leon
Ellen Bilotta	LuAnn Dean
Mary Boom	Juliana Deboviel
Jenifer Bouchard	Laura Deet
Johanna Boyd	Debra Dempsey
Victoria Branciforti	Terry Dennis
Tabitha Brewer	Carl Depalma
Susan Broussard	Susan Devita
Lexie Brown	Marianne Dickun
	Joanne Diehl

Jennifer DiSalvo
Kristina Donley
Myllinda Downing
Margo Dresch
Randy Dutter
Jennifer Eck
Nancy Edwards
Meghann Effenheim
Triva Egan
Shelly Eizyk
Debbie Elliott
Irina Elner
Ugochukwu Emezie
Jincy Endsley
Michelle Escobar
Gina Facen
Lisa Falcon
Kristen Farmer
Troy Felix
Regina Fick
Katie Fik
Clevesta Flannigan
Michele Flores
Katrina Flores Arana
Alexandria Foley
Dana Frank
Elaine Frantum-
Reed
Paula Franzi Moeck-
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Jay Son Fua
Elizabeth Gabel
Ryam Galang
Jennifer Gallo
Elizabeth Gardner
Crystal Gardner
Elizabeth Geonzon
Sharon Geraghty
Renee Gibbs
Nancy Gilligan-
Anderson
Lisa Gladden
Baley Glaze

Bethany Goldsmith
Veronica Gonzales
Terri Good
Melissa Gorbet
Shelley Guerrero
Sheila Gwin
Liberty Hackworth
Cynthia Hale
Richard Hall
Sherry Hall
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Elvia Harrison
Lora Hartland
Emily Harvey
Meagan Headrick
Janice Helton West
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Rose Mary Klein
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Kimbrell
Richelle Mas
Kristin Mathewson
Gilda Mayeta
Marianne McAllister
Angela McCain
Erin McCarthy

Sunny McCormick
Toni McDermott
Dawn McElhaney
Darlene McGuire
Charissa McKinnie
Tamela McKinzie
Shanda McNew
Jean Mead
Mary Miller, MD
Alicia Minard
Talma Mincey
Qin Ming
Emily Modin
Amy Moeves
Alan Mong, MD
Robert Montemayor
Heidi Montgomery
Sharon Moore
Heather Morehous
Herlinda Morris
Sarah Moses
Mary Muhs
Karen Murnan
Kelly Myers
Dana Neel
Mona Netherland
Penny Newark
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Don Ngo
Jasmine Noordeloos
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Diane O'Brien
Kimberly O'Brien
Elijah Ochung
Theresa Odukale
Sadiat Olayiwola
Dianne Oldcrow
Connie Oliver
Marni O'Neill
Kimberly Oropeza
Andrea Oser

Jesusa Oviedo
Jenny Pawlewicz
Michelle Pennington
Russell Petersen, Jr
Lolitha Phillips
LaDonya Pierce
Lindsey Poh
Beth Polak
Courtney Polasik
Wanda Porter
Angela Pritzlaff
Karen Queen
Leah Rafanan
LuAnn Reed
Monica Reinhardt
Roxanne Remus
Jessica Rico
Aimee Riel
Kimberly Rigdon
Holly Ritenour-
Hooks
Elnora Robinson
Anita Robinson
Catherine Robinson
Marta Rodriguez
Kim Rodriguez
Jerry Rodriquez
Niesha Russell
Hyang Ryoo
Barbara Sadowski
Freda Sansone
Monica Sarver
Marialyce Saunders
Tamara Schirtzinger
Lori Schmick
Margery Schmitt
Casey Schumacher
Bridget Sebastian
Candice Seibold
Betsy Shannon
Barbara Shepherd
Bal Shrestha, MD
Ma Corazon Sia

Wendy Sidorenko
Shannon Sikes
Helena Silman-
Cohen
Stephanie Simmons
Wanda Smith
Sharonda Smith
Susan Smith
Michelle Snyder
Jennifer Speed
Megan Speer
Tamera Speer
Lynn Stackhouse
Erika Stanley
Leslie Steffey-Davis
Stephany Stewart
Stephanie Stockwell
Susan Stokes
Angela Stone
Chriselle Sun
Larry Sutton, DO
Jessica Sylvia
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Benjo Tan
Janell Tatum
Victoria Taylor
Laura Tellier
Karyn Temple
Heidi Thompson
Danielle Thompson
Kelly Totman
Deala Trahan
Kay Tucker
Leann Tucker
Misty Tummins
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Lisa Uhl
Cynthia Valderrama
Brooke Vanderpool
Monica Vasquez
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Annabelle Walsh
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Laura Ward
Lisa Ware
Cornell Washington
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Kayla White
Anita Whitesides
Trisina Whiting
Sarah Wigchers
Gail Wilcox
Carla Wilkerson
Rebecca Wilks
Jennifer Williams,
MD
David Witty
Sandra Woodard
White
Mary Xenopoulos
Minangeles Zeas
Ashley Zent
Misti Zotz
Chris Zysk

Recertified certificants

Below are WCC
certificants who
were recertified
in April and May
2014.

Bonita Alderette
Charity Ampong
Traci Anderson
Maryann Andres
Jeannie Andries
Suzan Antonio
Tamela Baggett
Dorothy Bailey
Karen Barker
Laura Beebe

Tara Beering
Shannon Benjamin
Portia Benjamin
Teresa Bernaldo
Carrie Bilek
Jessica Boutin
Linda Braubitz
Renee Braun
Donna Breese
Doris Brogdin
Nanna Buckley
Kim Buhl
Wendy Bunch
Tammy Byrd
Kristi Cabral
Valerie Callaway
Audrey Campbell
Paul Cancio
Maria Cariaga
Tracy Carter
Carol Cattaneo
Wendy Chen
Rhonda Chesser
Nicholas Cianci
Vera Clemens
Belen Clemons
Patricia Cook
Monica Crivits
Kellie Crossland
McGarey-Peters
Annette Currin
Roberts
Karen Cuslidge
Roberta Dabbelt
Janice David
Ada Dickerson
Anne Dolloff
Debra Doubell
Carolyn Duenwald
Freda Duffy
Jessie Dunn
Carolyn Dvorak
Brett Emry

Sue Eugster
Vickie Faux
Wycliff Tayo Fawibe
Audrey Ferguson
Marlene Flanders
Aimee Fleeson
Donna Fraley
Roberta Futrell
Christina Gabbard
Mark Gagnon
Sarah Galbraith
Samantha Gates
Bonnie Gensch
Jeannie Gibson
Kathy Gillit
Kathleen Gorman
Rekha Goswami,
MD
Kathleen Green
Carla Green
Darcie Groeper, DO
Elaine Hales-Barlow
Kathy Hall
Emerald Heldt
Linda Henry
Maryland Hicks
Kurt Holifield
Corinne Hollister
Dawn Hover
Cynthia Hromadka
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Marcel Jenkins
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Yongmei Jin
Kathryn Johnson
Crystal Johnson
Barbara Jones
Tracy Lynn Jones
Rodgers
Rosalyn Jordan
Rhoda Kahn

Petrice Kam
Elaine Karlson
Tammy Kelley
Brian Kellum
Cheryl King
Arlene Kobulnicky
Jason Kowalski
Sarah Krasnick
Arun Lakshmiopathy,
MD
James Lang
Theresa Lewis
Fred Liedecke
Marti Livinghouse
Christa Logue
Hope Lopez
Sylvia Madden
Alicia Madore
Suzan Martz
Ellen Mays
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Mercedes Moreno
Christine Morris
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Joseph Myler
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Turner
Linda Orlovski
Karen Overdorf
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Caroline Pfaff
Susan Poirier
Lorraine Poliey
Jacqueline Ponessa
Melba Poole
Donna Reddell
LuAnn Reed

Julya Rempel
Sarah Rhodes
Rita Richmond
Kimberly Rojas
Denise Rosnick
Jane Rudman
James Russell
Jenica Rusu
Lynn Saunders
Michele Schneider
Andrea Schoenfeld
Edward Seals
Elizabeth Sharp
Eileen Sherburne
Evelyn Sills
Patricia Smith
Anita Smith
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