Wound Care ADVISOR

PRACTICAL ISSUES IN WOUND, SKIN, AND OSTOMY MANAGEMENT

Official journal of National Alliance of Wound Care and Ostomy®

Skin failures in a bariatric patient

Maggot therapy, part 2

Wound care in the home

What to do when someone pushes your buttons

November/December 2014 • Volume 3 • Number 6

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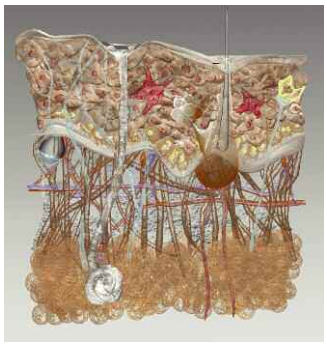
CONTENTS

November/December 2014 • Volume 3 • Number 6
www.WoundCareAdvisor.com

FEATURES



page 9

DEPARTMENTS

page 24

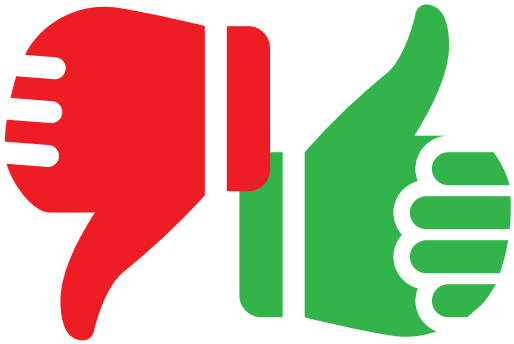
page 27

From the EDITOR

When should we take "No" for an answer?

Have you ever had a patient yell "Get out of my room!" or "Don't touch me! I don't want to be turned"? How about "No! Don't put those compression stockings on my legs!" or "No, I'm not going to wear those ugly orthopedic shoes!" or "No way. I can't stay in bed. I have to go to Bingo!"?

As clinicians, our first instinct usually is paternalistic, as if we're the patient's parent who knows what's best for our child. We think, "Sorry, but you have to do this. It's for your own good." And we convey that idea to the patient.



But do we have the right to force our notion of what's for the best if the patient has decided to refuse such care? One can argue that perhaps the patient is confused or has a mental disability, or that while patients are in our care, it's our duty and responsibility to take care of them according to what we believe is for their own good.

But what about a coherent and oriented patient? Adult patients have the absolute right to make the choice to accept or refuse recommended care. So, does that change our responsibility? Should we just take "No" for an answer and walk away?

The concept of informed consent holds that patients must have sufficient information to make a meaningful decision. So before we walk away, we need to dig deeper and find out the "why" behind the "No." Patients don't always understand why they've developed a wound or why they need compression stockings or orthopedic shoes to heal their wound. Think about it: When you ask patients what caused their leg wound, do most tell you it's because they have venous hypertension and an ankle-brachial index of 0.8? Not in my experience. Instead, they typically tell me they bumped their leg several months ago and it just won't heal.

So before giving up, review your patients' understanding of their diagnosis and treatment plan. Ask them to describe their diagnosis and treatment in their own words. As they do this, try to determine what their priorities are. As the old saying goes, "Before criticizing someone, walk a mile in their shoes." By increasing your understanding of what your patient is feeling and thinking, you can reach a mutual understanding.

Part of achieving that mutual understanding depends on adequate health literacy. Data from 2003 (the most recent year available) found about 80 million American adults (36%) had limited health literacy. According to a **report** from the Agency

View: health literacy[A]

for Healthcare Research and Quality, lower health literacy is linked to poorer outcomes in certain areas, such as overall health status among seniors. Keeping our communications free of jargon and using simple words can go a long way toward ensuring patients have the information they need to make better health decisions. (For more information on health literacy, watch the video "**Health literacy and patient safety: Help patients understand**" from the American Medical Association Foundation. Also access the **Health Literacy Universal Precautions Toolkit** from the North Carolina Program on Health Literacy.)

We also have to be willing to make reasonable adjustments to accommodate the patient's desires—for example, adjusting how the patient can apply a dressing while still maintaining aseptic technique. The key is to collaborate with the patient to achieve an acceptable solution. To help patients understand their options, sometimes we need to think out of the box, go the extra mile, or even compromise on certain aspects of the care plan to help reach a solution that best fits the patient's wishes and lifestyle.

Donna Sardina, RN, MHA, WCC, CWCMS, DWC, OMS
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Radiation and lymphedema

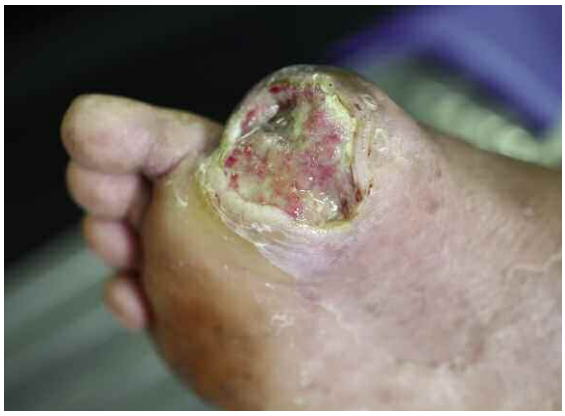
Radiation therapy doesn't increase the incidence of lymphedema in patients with node-negative breast cancer, according to research **presented** at the American Society for Radiation Oncology's 56th Annual Meeting held this fall.

The study consisted of a secondary analysis of the National Surgical Adjuvant Breast and Bowel Project B-32 trial. Researchers found no significant difference in standardized arm measurements or in patient reports of "bothersome" arm swelling during 3 years of follow-up.

Decline in diabetic foot ulcers may not be accurate

A study presented at the 2014 Interscience Conference on Antimicrobial Agents and Chemotherapy and reported in *MedPage Today* cautions that reports of the decline in diabetic foot ulcers may not be accurate.

According to "**Diabetic foot infections fall—not!**," the incidence of diabetic foot infections decreased from every 2.3 of 100 diabetes-related discharges in the United



States in 1996 to 1.1 of 100 diabetes-related discharges in the United states in 2010. However, the change may be more a result of changes in the definition of diabetes. Because more patients are now diagnosed with diabetes, the percentage of patients with diabetic foot infections decreases.

The study found that the absolute number of diabetic foot infections has remained "fairly constant."

Beehive protectant improves diabetic foot ulcer healing

A study published in the *Journal of Diabetes and Its Complications* and titled "**Topical application of the bee hive protectant**

propolis is well tolerated and improves human diabetic foot ulcer healing in a prospective feasibility study" included 24 patients. Propolis is an anti-inflammatory bee-derived protectant resin.

The article concludes the pilot study indicates for the first time that topical propolis "may enhance wound closure in this setting when applied weekly" and suggests a multisite, randomized trial is warranted.

Lymphedema risk factors identified

"**Risk factors for self-reported arm lymphedema among female breast cancer survivors: A prospective cohort study**" identified the following factors as increasing the risk of lymphedema: total or modified radical mastectomy, chemotherapy, hypertension, and prediagnostic body mass index of 30 kg/m^2 or more. In addition, the risk of developing lymphedema increased by 5% for each lymph node removed.

The study, published in *Breast Cancer Research*, included 666 women, of whom 29% developed lymphedema. The researchers also noted that breast cancer survivors who are younger, have had more lymph nodes removed, or received chemotherapy are at a higher risk for developing late-onset lymphedema, so they should have long-term monitoring.

Mindfulness can reduce depression in patients with diabetes

A study in *Diabetes Care* has found that individual mindfulness-based cognitive therapy and individual cognitive behavior therapy can reduce depression in patients with type 1 and type 2 diabetes.

"**Individual mindfulness-based cognitive therapy and cognitive behavior therapy for treating depressive symptoms in patients with diabetes: Results of a randomized controlled trial**" also reports positive effects on anxiety, well-being, and diabetes-related distress. There was no significant impact on HbA1c.

The study included 94 outpatients with diabetes and depressive symptoms. Patients were randomized to either therapy or a waiting-list control group.

Smoking increases risk of SSI after stomal reversal

Smoking increases the risk of surgical site infection (SSI) after stomal reversal surgery, according to a study in the *Journal of Gastrointestinal Surgery*. Smoking increased the risk by more than twofold.

"**Surgical site infections (SSIs) after stoma reversal (SR): Risk factors, implications, and protective strategies**" studied 528 patients, 6.8% of whom developed an SSI. Patients with an SSI had increased lengths of stay and 30-day morbidities. The researchers conclude that smoking cessation should be an important strategy for reducing SSI risk.

Lab test predicts mortality in patients with diabetes

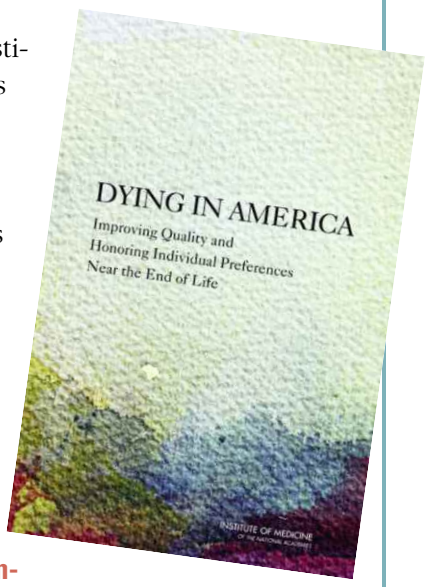
Diabetes Care has published the study, "**Osteopontin is a strong predictor of incipient diabetic nephropathy, cardiovascular disease, and all-cause mortality in patients with type 1 diabetes**."

Objective osteopontin (OPN) is a protein that may play a role in the arterial disease of patients with type 2 diabetes. Researchers studied 2,145 adults with type 1 diabetes and without end-stage renal disease (ESRD).

Serum OPN was higher at baseline in

patients who progressed to ESRD, experienced a cardiovascular event, or died during the follow-up, which had a mean of 10.5 years.

IOM report calls for improved end-of-life care



A **report** from the Institute of Medicine says the U.S. healthcare system isn't properly designed to meet the needs of patients nearing the end of life and those of their families, and major changes to the system are necessary.

"**Dying in America: Improving quality and honoring individual preferences near the end of life**" calls for more advance care planning by individuals and improved training and credentialing for clinicians. It also calls for federal and state governments and private sectors to provide incentives to patients and clinicians to discuss issues, values, preferences, and appropriate services and care. ■

Case study: Bariatric patient with serious wounds and multiple complications

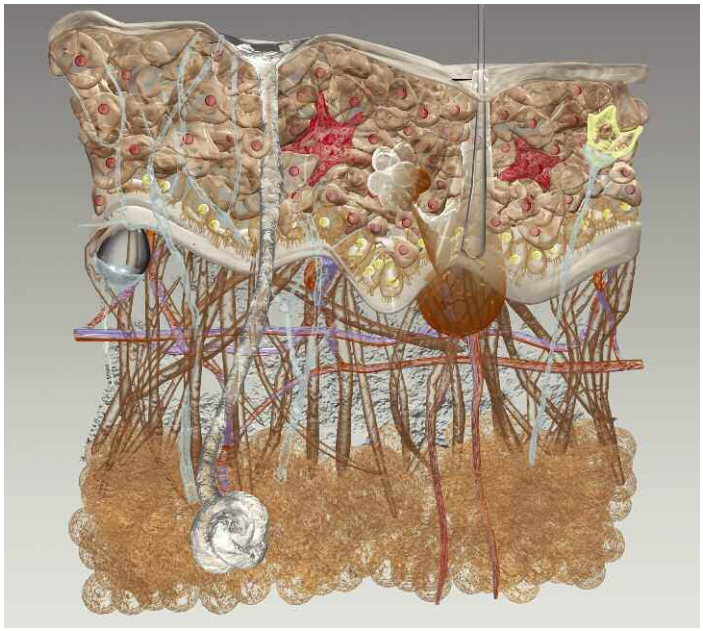
Learn about the challenges of caring for bariatric patients.

By Hedy Badolato, RD, CSR, CNSC; Denise Dacey, RD, CDE; Kim Stevens, BSN, RN, CCRN; Jen Fox, BSN, RN, CCRN; Connie Johnson, MSN, RN, WCC, LLE, OMS, DAPWCA; Hatim Youssef, DO, FCCP; and Scott Sinner, MD, FACP

Despite the healthcare team's best efforts, not all hospitalizations go smoothly. This article describes the case of an obese patient who underwent bariatric surgery. After a 62-day hospital stay, during which a multidisciplinary team collaborated to deliver the best care possible, he died. Although the outcome certainly wasn't what we wanted, we'd like to share his story to raise awareness of the challenges of caring for bariatric patients.

Health hazards of obesity

Obesity isn't just a cosmetic problem; it's a health hazard. Someone who's 40% overweight is twice as likely to die prematurely as someone of normal weight. Obesity has been linked to many serious medical conditions, including cardiovascular disease and stroke, high blood pressure, diabetes, cancer, gallbladder disease and gallstones, osteoarthritis, gout, respiratory problems (such as sleep apnea), depression, gynecologic disorders, erectile dysfunction and other sexual health issues, nonalcoholic fatty liver disease, and metabolic syndrome (a combination of high blood glucose, high blood pressure, and high triglyceride and cholesterol levels). Obesity also causes skin problems, such as poor wound healing. In obese persons, most wounds arise secondary to poor hygiene related to obesity.



Obesity in adults is determined from body mass index (BMI). (See *Defining obesity in adults.*)

Understanding bariatric procedures

Bariatric procedures fall into two main categories—restrictive and malabsorptive. *Restrictive* procedures limit the amount of food the stomach can hold, with the goal of reducing caloric intake. *Malabsorptive* pro-

Defining obesity in adults

Body mass index (BMI) is a measure of body fat in adults. It's based on height and weight.

- Normal weight: BMI of 18.5 to 24.9
- Overweight: BMI of 25 to 29.9
- Obese: BMI of 30 or greater.

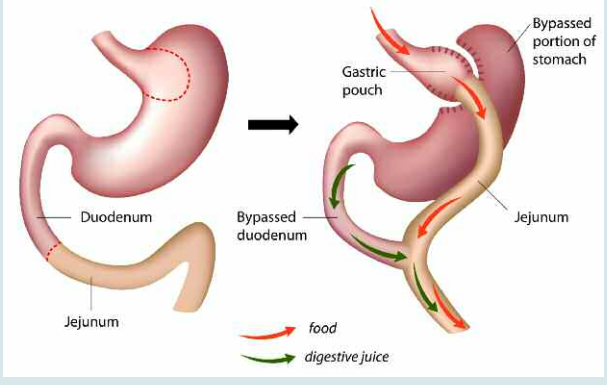
For a BMI calculator, visit www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm.

cedures bypass part of the small intestine, decreasing the amount of calories and nutrients the body absorbs. Some procedures are both restrictive and malabsorptive.

Restrictive bariatric procedures include laparoscopic adjustable gastric band and laparoscopic sleeve gastrectomy. Bariatric procedures that are both restrictive and malabsorptive include biliopancreatic diversion with duodenal switch (BPD-DS) and laparoscopic Roux-en-Y gastric bypass (LRYGB). Surgical complications associated with LRYGB and BPD-DS include anastomotic leaks, anastomotic strictures, and intestinal obstructions (See *Visualizing the Roux-en-Y procedure*.)

Visualizing the Roux-en-Y procedure

These before-and-after illustrations show the elements of a laparoscopic Roux-en-Y gastric bypass. This procedure reduces the amount of calories and nutrients the body absorbs and decreases the amount of food the stomach can hold.



Importance of nutrition in bariatric patients

Various GI complications may arise after bariatric surgery, including abdominal pain, nausea, vomiting, diarrhea, hernias, and ulcers. Common nutrient deficiencies associated with such surgery involve protein, calories, calcium, iron, copper, thiamine, vitamins A, B1, B6, B12, C, D, E, and K, and folic acid.

Nutrient deficiencies depend on the length of the absorptive area and percentage of weight loss. These deficiencies progress over time. However, they can be prevented with the help of a multidisciplinary team. Unless nutrition is addressed, patients with surgical complications may experience impaired wound healing, wound dehiscence, pressure ulcers, chronic wound infections, necrotizing fasciitis, decreased cardiac and respiratory functions, increased morbidity, and even death.

Nutrition before and after surgery

Nutrition plays a critical role in skin integrity, and lack of proper nutrition can lead to pressure ulcers, necrotizing fasciitis, venous stasis ulcers, wound dehiscence, and chronic wound infections.

Preoperative diet

Adhering to a strict preoperative diet helps reduce the risk of complications. For 2 weeks before bariatric surgery, patients should consume a liquid diet, which provides several benefits:

- promotes weight loss
- helps train the brain to eat less
- helps shrink the liver, which commonly is enlarged in morbidly obese persons due to excessive intake of complex carbohydrates
- promotes postoperative healing, which helps avoid complications.

Postoperative nutrition support

After bariatric surgery, barriers to adequate nutrition include lack of physician and nu-

tritionist collaboration, poor I.V. access, hemodynamic instability, hyperglycemia, and fluid volume imbalances. Removing these barriers requires a nutritional plan that begins before surgery.

For 24 to 48 hours after surgery, the patient should receive nutritional support (preferably enteral feedings). Such support is based on factors that contribute to physiologic stress, such as mechanical ventilation, fever, and extent of surgical wounds. Patients should receive a high-protein diet: 2 to 2.5 g/kg of ideal body weight (IBW), with 11 to 14 kcals/kg actual dry weight, or 22 to 25 kcals/kg IBW. Clinicians should stay alert for common nutrient deficiencies.

Enteral nutrition support commonly is the first choice for patients with a functional gut. Parenteral nutrition support is considered in patients with severe nausea or vomiting and gastric leaks. Ongoing monitoring of response to nutrition therapy with timely adjustment of the nutrition care plan is an important part of patient management.

The case of Gary T.

Gary T. (not his real name), a 42-year-old male, weighed 671 lb (304 kg) before LRYGB surgery; his BMI was 86.1. (Sixty days after surgery, his BMI had dropped to 66.1.) His comorbidities included diabetes, hypertension, and peripheral vascular disease.

Before and after surgery, the dietitian worked with Gary to address his nutritional needs. However, within 24 hours after surgery, his vital signs became unstable and he developed rhabdomyolysis (probably from his morbid obesity in conjunction with prolonged surgery). The nurse noted a deep-tissue injury (DTI) to the sacrum, possibly from the prolonged (7-hour) surgery and inadequate padding of the operating-room (OR) table. Eschar was firm, and the nurse applied an intact foam dressing to prevent further tissue injury.

Gary subsequently suffered multiple complications, many resulting at least partly from his poor nutritional status secondary to obesity. Below, members of the care team present their perspectives.

Intensivist Youssef

One day after surgery, Gary developed rhabdomyolysis, a syndrome of muscle necrosis with release of muscle enzymes into the circulation, leading to electrolyte imbalances and acute kidney injury. His creatine phosphokinase (CPK) level rose to 50,380 mcg/L; normal range is 0 to 235 mcg/L.

At the time, we thought his extremely high CPK level resulted from the sacral DTI secondary to prolonged surgery with the patient in one position and an inadequately padded OR table, in the setting of morbid obesity. CPK rises within 2 to 12 hours after onset of muscle injury and peaks in 24 to 72 hours; half-life is 1.5 days. CPK decreases by 40% to 50% daily unless continuous muscle injury occurs. Gary's CPK level stayed above 1,000 mcg/L for 2 weeks and didn't normalize until 6 weeks later. This contributed to prolonged renal failure, which persisted throughout his 2-month hospital stay.

For 24 to 48 hours after surgery, the patient should receive nutritional support.

Infectious disease specialist Sinner

Gary received prophylactic cefazolin during and immediately after surgery. We expected him to have early postoperative fevers. His initial urine, blood, and respiratory cultures were negative, as was a

methicillin-resistant *Staphylococcus aureus* nasal swab. He also received 1 to 2 days of piperacillin-tazobactam as empiric therapy due to the fevers.

One week after surgery, Gary's white blood cell (WBC) count rose and purulent drainage appeared in his Jackson-Pratt drain. Drainage cultures showed two modestly resistant *Escherichia coli* strains, a few streptococcal species, an anaerobe, and one yeast strain. GI flora were presumed to be present due to an anastomotic leak.

Four weeks after surgery, Gary's blood cultures showed carbapenem-resistant *Enterobacter*, limiting his treatment options. At 5 weeks postoperatively, his necrotic decubitus ulcer was debrided; cultures were mixed but included the highly resistant *Enterobacter*.

Gary subsequently suffered multiple complications, many resulting at least partly from his poor nutritional status secondary to obesity.

At 7 weeks, *Pseudomonas* was isolated from another decubitus debridement; this probably resulted from his previous tigecycline therapy, to which *Pseudomonas* is inherently resistant (given during postop week 3). *Stenotrophomonas*, which is inherently resistant to carbapenems, was isolated from his sputum following carbapenem treatment. In addition, non-*albicans Candida* was isolated in the urine, and stemmed from his previous fluconazole therapy. Vancomycin-resistant enterococci were isolated in his blood because of his previous broad-spectrum antibiotic therapy.

Gary's case underscores two important concepts:

- Duration and breadth of antibiotic therapy predicts which resistant organisms will be found later.
- Antibiotics can't fix surgical problems—in this case, anastomotic leaks and necrotic ulcer tissue. Extended and broad antibiotic therapy can lead to additional complications, including excess drug toxicity, multidrug resistant infections and *Clostridium difficile* colitis.

Nurses Stevens and Fox

On the first postop day, Gary required bilevel positive-airway pressure treatment because he developed atelectasis from complications of prolonged surgery and inability to move due to acute postoperative pain. This condition eventually progressed to acute respiratory failure, necessitating ventilation.

Mechanical ventilation continued for 2 weeks, with multiple failed weaning attempts related to new emergence of various infections, in turn leading to a cycle of systemic inflammatory response syndrome (SIRS), sepsis, severe sepsis, and multi-organ dysfunction syndrome (MODS). As a result, Gary required multiple vasopressors and continuous venovenous hemofiltration to manage hemodynamic MODS complications. After one infection was treated, another one emerged, and the cycle began again.

Two weeks after surgery, a tracheostomy was done because of Gary's inability to wean; the goal was to reduce the risk of ventilator-associated pneumonia linked to longer intubation. Maximum duration for an internal jugular dialysis catheter is 3 weeks, due to the infection risk. Gary's catheter had to be replaced three times during his hospital stay. He also had a left subclavian central line for central venous

pressure (CVP) monitoring and vasopressor therapies. Keeping a CVP line in place too long can lead to infection, so a peripherally inserted central line was placed.

Throughout his entire stay, Gary was compromised and had abnormal laboratory values. His albumin level ranged from 1.9 to 2.2 g/dL (normal range, 3.5 to 5.2 g/dL); blood glucose ranged from 79 to 424 mg/dL (normal range, 80 to 120 mg/dL); prealbumin measured 9 mg/dL (normal range, 18 to 45 mg/dL); and WBC count ranged from 15,100 to 39,400 cells/mm^3 (normal range, 4,000 to 11,000 cells/mm^3). Gary's weight ranged from 671 lb (304 kg) to 514 lb (233 kg).

Although the dietitians and physicians collaborated to develop a plan for nutritional support, Gary's obesity and comorbidities made it difficult to gain traction in healing his wounds.

Wound care

Wound care was a particular challenge. It took more than 1 hour daily to reposition Gary and clean and dress his wound with intact eschar, and nearly 2 hours for open wounds. Transporters (usually three or four at a time) aided in turning and repositioning him. A self-turning bed that assists with right and left turns was used. The wound care nurse, physicians, and a dietitian were present for daily wound care. Gary's wife was at the bedside to provide comfort.

For patients in optimal health, debridement, pressure relief, and moisture-retentive dressings can aid wound healing. But Gary wasn't in optimal health. When his hospital stay exceeded 30 days, he had to be transferred to another facility. The extra-special handling required for the move included an additional air mattress and additional foam protection. His situation became even more complicated and he required additional care and handling.

In the new location, Gary's sacral wound suddenly became malodorous. The eschar was boggy but remained intact with no drainage. A partial CT scan (Gary couldn't fit into the scanner entirely) revealed gas gangrene. Bedside sharp debridement was performed immediately. The pathology report showed Gram-positive cocci and rods—morphologies of common anaerobic organisms that can cause gangrene.

Sad outcome

Over the next several weeks, Gary's wounds worsened. Large amounts of purulent matter continued to drain from tunnels that extended upward from undermined areas, and muscle necrosis developed. The area beneath the pannus was open and draining. Multiple surgical sites in the abdomen were open and draining foul-smelling purulent drainage. Both lower extremities developed multiple areas of necrosis. (See *Declining postoperative course: Photos tell the story.*)

For patients in optimal health, debridement, pressure relief, and moisture-retentive dressings can aid wound healing.

Despite medical and nursing interventions, Gary was visibly deteriorating. On day 61, everyone involved in his care, including his wife, met and decided to withhold all life-sustaining measures. He died soon after being removed from the ventilator.

As this case demonstrates, a good patient outcome may not be possible even with optimal management of nutrition, wounds, and infection by a competent,

Declining postoperative course: Photos tell the story

These photos show the condition of the patient's wounds at various intervals after bariatric surgery.

1. This photo shows the sacral wound as it appeared 1 month and 9 days after surgery.

2. One week later, the sacral wound and necrosis had worsened.

3. This photo, taken about 6 weeks after surgery, shows muscle necrosis.

4. A pressure ulcer formed from the weight of the pannus.

5. Multiple areas of necrosis developed secondary to patient deterioration and malnutrition.

dedicated healthcare team. When the patient continues to deteriorate, as Gary did, keeping him comfortable and maintaining his dignity take the highest priority. ■

Hedy Badolato and Denise Dacey are dietitians. Connie Johnson is a wound care nurse. Kim Stevens and Jen Fox are staff nurses. Hatim Youssef is an intensivist. Scott Sinner is an infectious disease specialist.

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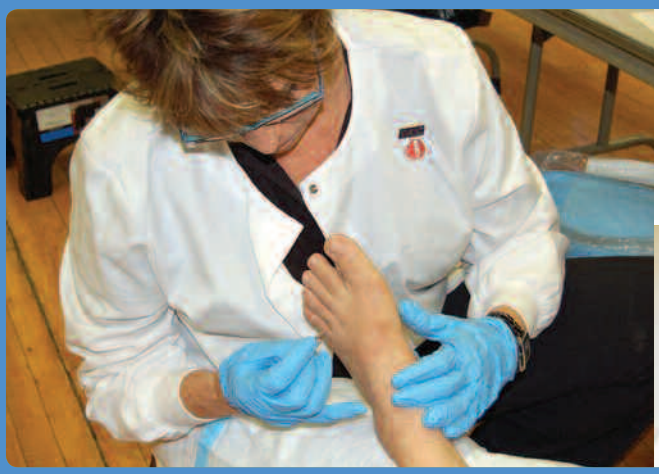

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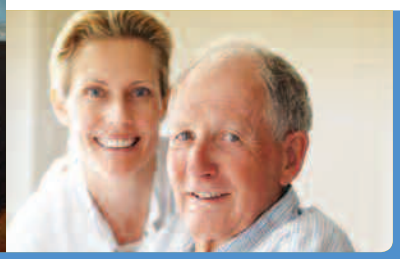

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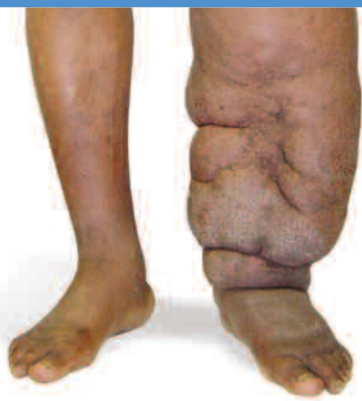

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Linear wound measurement basics

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.

Measurement of wounds is an important component of wound assessment and provides baseline measurements, enables monitoring of healing rates, and helps distinguish among wounds that are static, deteriorating, or improving. All alterations in skin integrity, including those caused by ulcers, venous ulcers, arterial ulcers, neuropathic ulcers, incision lines, grafts, donor sites, abscesses, and rashes should be measured when they're discovered and at intervals thereafter, based on institutional policy.

Maintaining consistency

Because measurements are compared to determine healing progress, it's important to use consistent technique. That starts with adequate lighting and cleaning the wound before measuring it.

Here are some more tips for maintaining consistency:

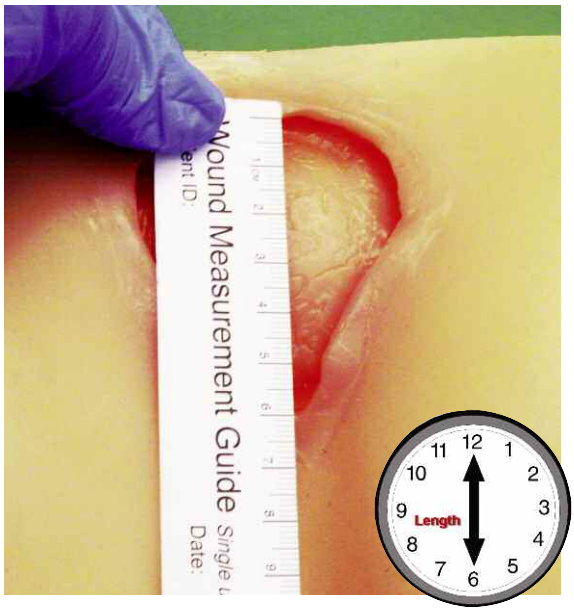
- Position the patient so the wound is as far from the sleep surface as possible; for example, if the wound is on the left hip, position the patient with the right hip resting on the mattress. This makes it easier to access the wound for measurement.
- Place the patient in the same anatomical position each time you take a measurement. Different positions may cause the contours of the surface of the wound to change owing to stretching or sagging of the surrounding skin and prevent accurate measurements.
- Measure and document wounds in centimeters and record measurements in the order of length, width, and depth; for example, "4 cm × 2 cm × 0.5 cm."
- Use the clock system to ensure consistency in length versus width. Consider the wound as the face of clock, with 12:00 pointing to the patient's head and 6:00 pointing toward the patient's feet. In this case:
  - length = 12:00–6:00 with patient's head and feet as guides
  - width = 3:00–9:00 side to side.

When measuring ulcers on the feet using the clock system, consider the heel as 12:00 and the toes as 6:00.

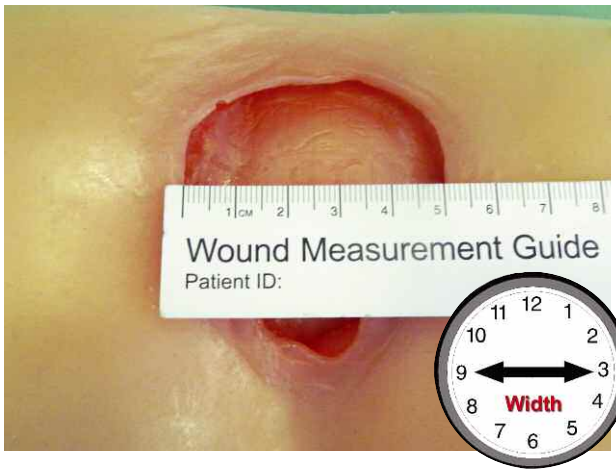
Procedure

Gather needed equipment, explain the procedure to the patient, and follow these steps for the best results:

1. Prepare a clean, dry work area at the bedside. Apply disinfectant solution to the work surface.
2. Wash your hands and apply gloves.
3. Position the patient so the wound to be measured is as far from the sleep surface as possible. Avoid exposing the patient unnecessarily.
4. Follow your facility's procedures for dressing removal and wound cleaning.
5. Discard your gloves, wash your hands, and apply clean gloves.
6. Use a centimeter ruler to measure the length of the wound. Take the measurement from open wound edge to open wound edge at the longest point. The direction of length is from head to toe or, using the clock method, 12:00–6:00.

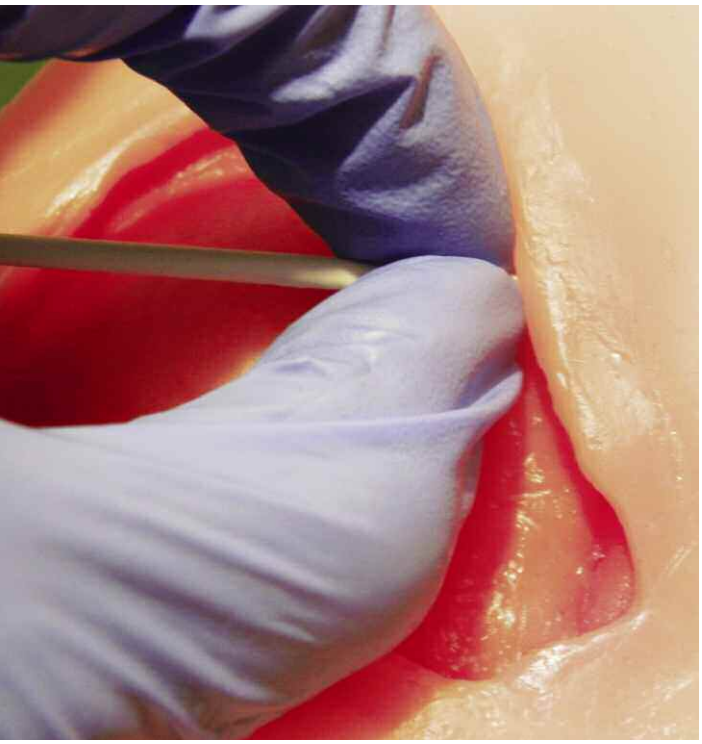


7. Use a centimeter ruler to measure the width of the wound. Again, take the measurement from open wound edge to open wound edge at the longest point. The direction of width is from side to side or, using the clock method, 3:00–9:00.



8. To measure depth, moisten a cotton-tip applicator with saline solution. Place the applicator into the deepest area of the wound, keeping the applicator vertical to the wound bed. Grasp the applicator with the thumb and index finger at the point where the applicator exits the wound at skin level. While still grasping the applicator, remove it from the wound and place it next to the centimeter ruler to measure. If the depth varies, take measurements in different areas. The recorded depth should be the deepest spot of the wound measured.
9. To measure tunneling, insert a saline-moistened cotton-tip applicator into the tunneled area and grasp the applicator where it meets the wound's edge. While still grasping the applicator, remove it from the wound and place it next to the centimeter ruler to measure. Repeat for each tunneled area.
10. To measure undermining, insert a saline-moistened cotton-tip applicator into the undermined area and grasp

the applicator where it meets the wound's edge. While still grasping the applicator, remove it from the wound and place it next to the centimeter ruler to measure. Progressing in a clockwise direction, document and measure the deepest sites all around the wound edges where undermining occurs.



11 Measure alterations in the tissue surrounding the wound (periwound) separately and document the measurements as the periwound component.

12 Assess wound characteristics to determine appropriate interventions.

13 Apply the prescribed wound treatment and dressing.

12 Discard your gloves and all used supplies in a trash bag, which should then be placed in the appropriate waste receptacle. Wash your hands and make the patient comfortable.

Because measurements are compared to determine healing progress, it's important to use consistent technique.

Documentation

Don't forget to record your findings in the patient's clinical record. Be sure to document the following (use centimeters for all measurements):

- length, width, and depth in of the wound
- any undermining. Use the clock method and centimeters to describe location and depth. Be as specific as possible. For example, "Undermining noted from 6–10 o'clock, ranging from 2–4 cm, deepest area is 4 cm at 10 o'clock" is helpful, but the following is better: "Undermining noted along wound perimeter from 6–10 o'clock. 6:00—2.8 cm, 7:00—2 cm, 8:00—3.6 cm, 9:00—2.5 cm, 10:00—4 cm."
- depth and direction of tunneling measurements; for example, "2 cm tunnel at 3 o'clock."
- any periwound breakdown, including location, characteristics, and measurements. ■

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.

Building an effective pressure ulcer prevention program

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

As a wound care nurse, do you feel the weight of the world on your shoulders when trying to implement a pressure ulcer prevention program? Many staff members think it's up to the wound care nurse alone to implement the program. However, a successful program requires involvement from all staff and is a 24/7 endeavor. Here's how to do it.

Gather the best and brightest

The first step is to surround yourself with key staff and other clinicians to help you lead and implement the program. Build an interdisciplinary team that includes, at a minimum, dietitians, therapists, nurses, nursing assistants, physicians, and nurse practitioners. Be sure all shifts are represented.

Nursing assistants are the ones who implement preventive interventions, so they form the foundation of your team. Give them a strong knowledge base on interventions that will help prevent pressure ulcers. Empower them to organize their shifts and roles to ensure interventions are implemented and communicated.

Other key team members you might not think to include are representatives from housekeeping and maintenance. When cleaning the room, housekeeping staff can confirm that the correct mattress is in the correct patient room and ensure the support surface is plugged in. In an emergency situation, maintenance staff should be able to troubleshoot product problems until the manufacturer can respond.

Finally, don't forget representatives from restorative nursing; the more mobile your patients are the less likely they will develop pressure ulcers.

Establish a system

Set up regular meetings to discuss skin integrity; it's best to keep the meetings to a consistent time and day of the week to facilitate attendance. Move the meeting past simply reviewing patients with wounds to taking a proactive approach. Review patients who are at high risk for pressure ulcers and ensure they have appropriate preventive interventions in place.

Engage in ongoing monitoring to en-

sure interventions such as heel elevation are being implemented. If possible, the wound care nurse should perform monthly random audits of the following:

- medical records and care plans of a few high-risk patients on each unit to ensure risk assessments and care planning are appropriate and per policy.
- spot check of some new admissions to ensure interventions are in place within 24 hours of admission.
- review of treatment records to ensure accurate transcription and a signature that treatment orders have been completed.

It's also important to set up pressure ulcer prevention education for all staff during orientation and at least yearly. Ensure at least 70% of staff attend the education sessions. Have fun with education, make it interactive, and involve therapy, dietary, maintenance, and housekeeping staff.

It takes a team

No pressure ulcer prevention program will be successful if the mindset of staff is that it's entirely up to the wound care nurse. A successful program involves multiple disciplines and representatives from all shifts to ensure patients don't develop skin integrity issues. ■

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.

An easy tool for tracking pressure ulcer data

By David L. Johnson, NHA, RAC-CT

As a senior quality improvement specialist with IPRO, the Quality Improvement Organization for New York State over the past 11 years, I've been tasked with helping skilled nursing facilities (SNFs) embrace the process of continuous quality improvement. A necessary component of this effort has been to collect, understand, and analyze timely and accurate data. This article discusses a free tool I developed to help SNFs track their data related to pressure ulcers and focus their quality improvement efforts for the greatest impact.

The beginning

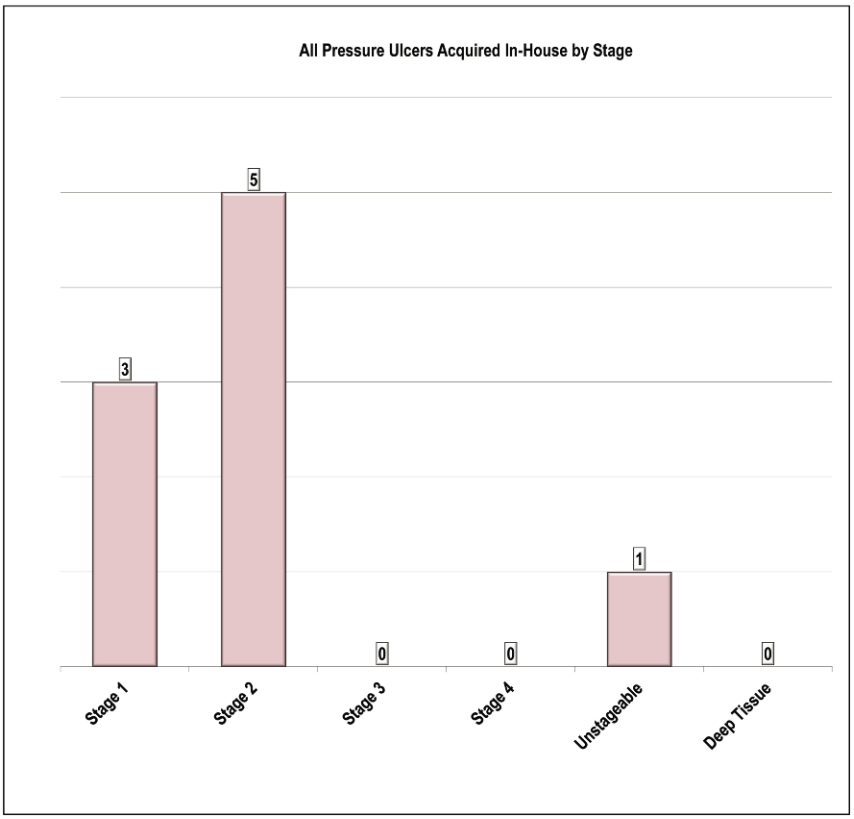
Since 2002, the quality initiatives administered by CMS have included the prevention and treatment of pressure ulcers as a focus topic for SNFs across the country. The challenge has been to guide identified facilities to collect their own data, in real time, and drill down into that data to identify trends and opportunities for improvement.

Sample data calculation and graph for all acquired in-house pressure ulcers by stage

	ALL Pressure Ulcers Acquired In-House by Stage	
	#	% of Total
Stage 1	3	33.33%
Stage 2	5	55.56%
Stage 3	0	0.00%
Stage 4	0	0.00%
Unstageable	1	11.11%
Deep Tissue	0	0.00%
TOTALS-->	9	100.00%

THIS INFORMATION INCLUDES THE "ACQUIRED IN-HOUSE" (NOSOCOMIAL) THAT ARE NEW FOR THE CURRENT MONTH AND ANY CARRIED OVER FROM PREVIOUS MONTHS.

One West



In 2002, I decided to develop a tracking tool to help SNFs with the timely collection of their pressure ulcer data. The tool had to be in a format that could be easily used by most providers, including those with basic computer equipment and operating skills. The purpose of this tracking tool was not to replace the necessary clinical documentation of the pressure ulcers, but to offer a focused document with pertinent statistical information for all cases of pressure ulcers in the SNFs at any point in time.

The current Monthly Pressure Ulcer Tracking Form is in its fifth generation. First developed in an Excel 2003 format, the original tracking tool was very functional, but basic. However, Excel 2007 enabled me to add functionality that launched the originally developed tool into a format offering not only a detailed summary and graphs for the entire SNF but also instant access to individual summaries and related graphs for up to 15 separate user-defined locations. For example, those designated locations could be as general as individual units or as detailed as specific care assignments.

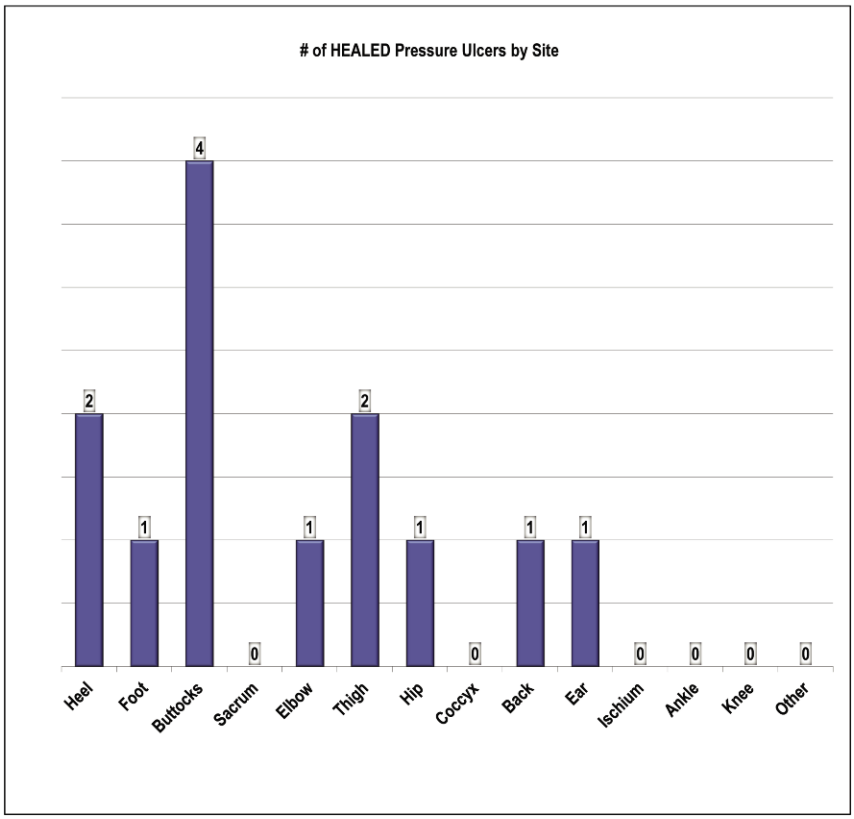
How it works

The current version of the Monthly Pressure Ulcer Tracking Form offers the convenience of an Excel spreadsheet to instantly summarize and graph your pressure ulcer data by such categories as site, origin, stage, age of wound (auto-calculated), days to heal (auto-calculated), and weekly response to treatment. The tracking form also summarizes all wounds that are new

Sample data calculation and graph for all healed pressure ulcers by site

ALL HEALED Pressure Ulcers by Site	THIS INFORMATION INCLUDES ALL PRESSURE ULCERS HEALED DURING THE MONTH.	
	# of HEALED Pressure Ulcers by Site	% of HEALED Pressure Ulcers by Site
Heel	2	15.38%
Foot	1	7.69%
Buttocks	4	30.77%
Sacrum	0	0.00%
Elbow	1	7.69%
Thigh	2	15.38%
Hip	1	7.69%
Coccyx	0	0.00%
Back	1	7.69%
Ear	1	7.69%
Ischium	0	0.00%
Ankle	0	0.00%
Knee	0	0.00%
Other	0	0.00%
TOTAL-->	13	100.00%

Entire Facility



for the month, by both site and stage and by whether they developed in-house or were present on admission. (See *Sample data calculation and graph for all acquired in-house pressure ulcers by stage.*)

All of the printed summaries and graphs are clearly identified by their user-defined facility location. Users can quickly identify the data source with the opportunity to easily detect both adverse trends and their own program successes.

Built-in macros for the tracking form walk the user through everything from adding a new case to an end-of-month routine that conveniently saves the data in the current monthly file. The macros then remove the information for all healed or discharged pressure ulcer cases before carrying over all of the data on existing pressure ulcers for the start of a new month of tracking.

All wounds are entered only once, and the weekly status update is as simple as a single letter code for "new," "improved," "same," "worsened," or "healed." The data format was intentionally built to allow these factual entries to be clerically entered after collection and assessment by the appropriate professional.

The user is guided through the data entry process with helpful hints in cell drop-down menus as well as embedded data validation rules to restrict what is entered, thereby offering a summary and analysis true to the expectations and spirit of the tracking form.

Efficient data collection in real time is invaluable to wound care teams, offering

them the potential to immediately identify adverse trends or celebrate small successes in their wound care program. Take, for example, a calculated increase in facility-acquired stage 2 pressure ulcers. Is there a common site? Is the increase isolated to one designated location or unit? Are there opportunities for focused education efforts, such as early identification or proper prevention practices? The ability to drill down into your data will allow you to focus your limited resources in the areas of identified documented need. (See *Sample data calculation and graph for all healed pressure ulcers by site.*)

In another example, the data analysis offered instantaneously through this tracking form can easily compare data among designated units within your facility. Is there a unit experiencing better healing times? Has there been a unit experiencing no facility-acquired pressure ulcers? What does that tell you about its prevention practices? How can those practices be spread?

A free resource

In summary, the timely collection, analysis, and attention to your facility's pressure ulcer data can be invaluable in your internal quality improvement efforts.

These tracking forms are available for download free of charge at **nursinghomes.ipro.org** under "Clinical Topics, Pressure Ulcer Clinical Tools and Resources." You can download a tracking tool with sample data (for demonstration and training purposes), a master blank file for immediate facility implementation, and a multipage PDF desk-side instructional booklet. The instructional booklet offers simple, clear instruction with actual screen prints to help guide the user through the tracking tool functionality.

The original tracking tool written in Excel 2003 is still available for those providers with Excel versions earlier than 2007. However, the functionality of the latest generation, which is available to anyone with Excel 2007 or newer, is far superior and highly recommended.

Efficient data collection in real time is invaluable to wound care teams, offering them the potential to immediately identify adverse trends or celebrate small successes in their wound care program.

For additional information, please e-mail me at david.johnson@hcqis.org. ■

Note: This material was prepared by IPRO, the Medicare Quality Improvement Organization for New York State, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents do not necessarily reflect CMS policy. 10SOW-NY-AIM7.2-14-24.

David L. Johnson is a senior quality improvement specialist with IPRO, the Quality Innovation Network-Quality Improvement Organization for New York State.

Developing a successful program for wound care in the home

By Stanley A. Rynkiewicz III, MSN, RN, WCC, DWC, CCS

Developing a successful wound care program requires a strong commitment and a willingness to learn. Our experience with creating such a program at Deer Meadows Home Health and Support Services, LLC (DMHHSS), a nonprofit home-care facility in Philadelphia, Pennsylvania, may help others build a similar wound care program and reap the rewards of a more confident staff as well as improved patient outcomes.

Filling a need

I'm the administrator at DMHHSS, which is accredited by the Community Health Accreditation Program. Since its inception in 2009, our organization has provided quality home health services to more than 2,500 patients in our service area, and DMHHSS continues to grow.

After the organization was up and running, it didn't take us long to recognize we needed more expertise in the area of wound care to meet our goal of quality care and positive patient outcomes. Wound care in the home differs dramatically from wound care in a hospital setting and presents its own challenges. Many of our patients have chronic comorbidities, such as diabetes and peripheral vascular disease, and present with chronic wounds or open sores that don't heal easily. Most of our patients live alone or have a caregiver who's unable or unwilling to change dressings. Consequently, wounds take longer to heal and the patient's quality of life is diminished.

With these patient facts in hand, my clinical director, Irene Dudley, BSN, RN, OMS, WCC, and I decided that DMHHSS would initiate a wound care program to ensure comprehensive, consistent, and dependable quality care for our patients.

Deepening knowledge

Our first goal was to educate our clinical staff in all aspects of wound care, including state-of-the-art products and evidence-based protocols, which would help clinicians determine appropriate supplies necessary for care and calculate the frequency of visits.

Certification in wound care is a natural outgrowth of our clinical staff education

and an essential component of our wound care program. (See *About certification*.) Certification helps our nurses demonstrate their interest and knowledge in a specialized area of patient care. Our wound care certified nurses report a sense of personal satisfaction, pride, and confidence in their ability to manage complicated wounds. In addition, these professionals also earn the respect of their employers, colleagues, physicians, and patients. Wound certification has strengthened our team.

Wound care program in action

Once wound care education had been completed, we created a system that promotes consistent, quality care. Patients admitted to the DMHHSS wound care program are assigned a primary nurse who makes regular visits to the patients' homes. While treating and monitoring a patient's wound, DMHHSS staff also teach patients and caregivers about best practices to help improve would healing, including nutritional needs, environmental hazards, and cleanliness. Our clinical staff, along with the management team, regularly review the plan of care to ensure that patients' needs are being met. DMHHSS staff also work closely with the physicians and keep them informed on the patients' wound-healing progress.

Since the initiation of the wound care program at DMHHSS, we have earned the respect and trust of the physicians, and our census growth has improved by more than 300%. Our clinical staff now has a strong and trusting relationship with the physicians, who welcome the input of our knowledgeable and certified staff. Frequently, the physician will consult the WCC nurse to determine the best practice regarding a patient. Wound healing is promoted when all caregivers focus on the same goals and communicate changes in a timely manner.

About certification

The roles of the WCC (Wound Care Certified), DWC (Diabetic Wound Certified), and OMS (Ostomy Management Specialist) are based on expert, evidence-based clinical knowledge and skills that are practiced in acute-care, outpatient, long-term care, and home-care settings.

The **WCC** plays an important role as a direct-care provider, educator, and resource person for optimum patient outcomes in wound and skin care management.

The **DWC** provides direct patient care, necessary patient education, and prevention measures through comprehensive assessment, referrals, and continuing evaluation of high-risk diabetic patients and all types of diabetic wounds.

The **OMS** offers assurance to patients that the healthcare practitioner is competent to provide the delivery of safe and effective ostomy and skin management. The certification also provides recognition that the certificant has demonstrated proficiency in the knowledge, skills, and expertise required for all aspects of ostomy treatment, therapy, and management.

The National Alliance of Wound Care and Ostomy (NAWCO) is the credentialing board for the WCC, DWC, OMS, and LLE (Lymphedema Lower Extremity) certifications. Wound care certification demonstrates distinct and specialized knowledge in wound management, thereby promoting a high quality of care for patients with wounds. In addition to certification, NAWCO provides resources and support to wound care professionals that advance certificants' recognition in their careers.

Community outreach

In addition to the overall program at DMHHSS, my certification in wound care inspired me to create a free diabetic foot-screening clinic in Philadelphia. My goal was to create a reproducible clinic model that could be run on a low budget, funded by sponsorships from business part-

Our postclinic discussions made it clear that our outreach work had only scratched the surface of a greater need.

ners. It took hard work, careful planning, and thorough preparation to make this clinic a reality, starting with a team of volunteer professionals and other personnel who helped with ensuring due diligence, setting up the clinic, creating advertisements and forms for the clinic, procuring sponsors, finding additional volunteers, and assembling educational packets.

DMHHSS held two one-day clinics in 2013, one at Reba Brown Senior Residence in Southwest Philadelphia from 8 a.m. to 2 p.m. and the other at Deer Meadows Retirement Community in Northeast Philadelphia from 9 a.m. to 1 p.m. We advertised the clinics on our website and Facebook page and through community e-mail blasts, press releases to several newspapers and radio stations, and event flyers distributed throughout the Philadelphia area.

Staff at each event included administrative staff who greeted people and helped them with registration and moving through the process, volunteer nurses, WCC- and DWC-certified clinicians, and a podiatrist. All registration forms, including consent for screening, were collected and maintained by DMHHSS. I continued to expand upon this outreach project in 2014, refining my diabetic foot-screening clinic model. This year, DMHHSS held its second annual clinic at Reba Brown Senior Residence. We plan to continue to offer the clinic annually, and introduce the concept in other areas in Philadelphia.

To date, these successful diabetic foot-screening clinics have drawn nearly 280 Philadelphians, ranging in age from 35 to 85. The appreciation of the participants was heartfelt and evidenced by the thankful looks on their faces. We were able to provide participants in need with follow-up visits by local visiting podiatrists, which will ensure continuing foot care to those who, in the past, were at risk.

Our postclinic discussions made it clear that our outreach work had only scratched the surface of a great need. Much more needs to be done regarding wound care in our community, and our knowledge and expertise have the potential to produce an enormous impact. If you would like information on starting a similar clinic to pay it forward in your own community, contact me at **srynkiewicz@deermeadowshomehealth.org**.

A sense of pride

We market DMHHSS as a facility with wound care certified clinicians, which distinguishes us from other home health providers. This strategy has yielded new referral sources and new relationships with physicians and wound care centers. Our entire staff feels a sense of pride in all we have accomplished. They are proud to be part of our future as we continue to learn and grow our expertise in home health care. ■

Stanley A. Rynkiewicz III is the administrator at Deer Meadows Home Health & Support Services, LLC, in Philadelphia, Pennsylvania.

Using maggots in wound care: Part 2

Learn how to set up a maggot therapy program.

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

NOTE FROM THE EDITOR: *This is the second of two articles on maggot therapy. The first article appeared in our July/August 2014 issue.*

Whether your practice is an acute-care setting, a clinic, home care, or elsewhere, maggot debridement therapy (MDT) can prove to be a useful tool in wound care. But setting up any new program can meet resistance—and if you seek to establish a maggot therapy program, expect to meet significant resistance. By arming yourself in advance, you can achieve your goal more easily. This article covers all the bases to help you get your maggot therapy program off the ground.

Know what you're getting into

Be knowledgeable. Do your homework and learn all you can about maggot therapy. Know what it can and can't do, how it works, and the lifecycle of flies and maggots. Learn about the most common complications and how to avoid them. To gain knowledge, use the wealth of instructional resources in journals, on the Internet, and at conferences. Be aware that the Biotherapeutics, Education, and Research (BTER) Foundation (**www.BTERFoundation.org**) has many resources devoted to maggot therapy; most are available for free. You can contact the foundation directly to arrange lectures, workshops, and webinars. Also consider attending a professional wound care conference, such as Wild on Wounds, which usually features a maggot therapy workshop. (See *Maggot therapy resources*.)

Recruit allies

A common obstacle to an MDT program is inability to find others who want to get involved. But try to get at least one other person on your side (more if possible), and make sure this person is an influen-

Maggot therapy resources

The Biotherapeutics, Education, and Research Foundation offers many programs and services for both patients and clinicians. They include:

- "Is MDT for Me?", an educational brochure for patients
- therapist referral list
- biotherapy library and multimedia collection
- video interviews of patients who've had maggot therapy and clinicians who administer it
- instructional videos for clinicians seeking to learn how to apply maggot therapy dressing
- video lectures from the International Conference on Biotherapy
- conferences and workshops
- patient assistance grants and financial support.

For more information, visit http://bterfoundation.org/patientpublications.

tial member of the wound care team. The strongest ally may be the head of the wound care or skin integrity team, a surgeon, or the infection prevention officer. These individuals not only can lend support for an MDT program but also fend off such excuses as, "Maggots are an infection risk," or "The Joint Commission will never approve." If you don't reach out to these individuals and convince them of the merits of your vision, the opposition may recruit them to block your efforts to establish a program.

Be prepared

Once you decide an MDT service can yield a net benefit for your facility's wound care program, you'll still need to convince colleagues and administrators of its merits. Don't be scared; be prepared by working out everything in advance. Develop policies and procedures for the use of MDT in wound care. (On the BTER website, registered users can download a policy and procedure template at **www.bterfoundation.org/policytemplates**.)

Create a plan for patient and therapist education. The BTER Foundation's patient education brochure "Is MDT for Me?" is a valuable educational resource available on the foundation's website, along with recorded patient interviews.

Developing a notebook of peer-reviewed clinical studies also can help you prove MDT is effective in treating pressure ulcers, venous stasis ulcers, diabetic foot ulcers, postoperative ulcers, or other specific conditions. Be sure this notebook includes documents indicating that the maggots your clinic will use are cleared for marketing by the Food and Drug Administration. (The BTER Foundation maintains a library of such literature, available to members.) By addressing these and other likely problems or obstacles in advance, you won't have to spend the next year searching for solutions.

Be flexible

Ultimately, your MDT program will need to fit into your facility's wound care program. Prepare for the possibility that your facility might impose certain requirements—insisting, for instance, that your patients be treated as in-patients or that all maggot dressings are applied by medical staff. To get your program off the ground, keep an open mind and consider meeting such requirements and making compromises. Remember: it will be easier to renegotiate for the policies you want once others see firsthand that your program is running well.

Dealing with administrators and the "NIMBY" mindset

Anticipate questions by administrators, and have on hand the data or publications that support your answers. Address the areas of concern to those who are responsible for patient safety, financial solvency, and public relations. Present your plan for patient and staff education and safety.

Many healthcare administrators acknowledge that maggot therapy is effective, safe, and cost effective, but they don't want it in their facility. This is the "not in my backyard" (NIMBY) mindset. If you don't have buy-in from the administration, your program will be a nonstarter. So when looking for allies to join your effort, consider approaching a hospital administrator or someone who works closely with the administration, such as a department head (chief of orthopedic, reconstructive, or podiatric surgery), chief of nursing or rehabilitation medicine, leader of the infection-prevention team, or chair of the skin integrity committee. Don't choose someone you don't know; instead, select someone you're comfortable with, who will respect you and listen to you.

To communicate more effectively with administrators, try to see the issue from their viewpoint. Some administrators are concerned about flies getting loose in the hospital, passing the next inspection by The Joint Commission, hospital-acquired myiasis (parasitic infestation), negative media attention, and poor public perception. Be prepared to explain why each of these concerns is unfounded. To do this, perhaps you can arrange a chat between your administrators and an administrator from another healthcare facility that has an MDT program in place. Or ask a maggot-therapy experienced administrator from another facility to write a letter to your administrators. Be sure to emphasize that maggot therapy can bring positive local media attention and decrease costs for inpatients, uninsured patients, and anyone else on a capitated or fixed-fee reimbursement scheme.

You'll have an easier time getting the administration to sign off on an MDT service if you can demonstrate that maggot therapy is cost-effective and reimbursable. Ask your coding department or maggot suppliers for help in this area, if

How to answer commonly asked patient questions

When discussing the option of maggot therapy with patients, be prepared to answer these commonly asked questions:

Question: Is the treatment painful?
Answer: Most patients feel no pain. But if your wound is already painful, you may have some discomfort or pain after about 24 hours, when the maggots become large enough to be felt, especially if they crawl over sensitive areas or squeeze into the nooks and crannies. Fortunately, pain can be treated with simple analgesics—or relieved completely by removing the maggots early, after just 24 to 36 hours, for example. As the maggots eliminate necrotic tissue, quell the infection, and dissipate inflammation, wound pain diminishes. So, if you need a second or third treatment, you're unlikely to experience as much discomfort.

Question: Will the maggots burrow? What do they eat if there's no more necrotic tissue for them to dissolve or feed on?
Answer: Medicinal maggots aren't capable of dissolving healthy tissue, so they can't burrow into healthy tissue. In fact, they're self-extracting: Once they're satiated or when no more necrotic tissue is left, they line up at the wound edge, ready to leave as soon as the dressing is opened.

Question: Will the maggots become flies in the wound or immediately afterward?
Answer: No, they won't become flies. Maggots must go through a significant anatomical change before they can mature into flies, and this takes more than 2 weeks at room temperature. Even then, they can't lay eggs and make more maggots for at least 2 more weeks. Before the maggots even have a chance to mature, they're removed from the wound after just 48 to 72 hours and discarded along with normal wet dressing waste in a sealed biohazard bag.

Using the butterfly analogy

To explain to patients how a larva metamorphoses into a fly, you might want to use the analogy of the butterfly lifecycle: egg, caterpillar, cocoon, adult butterfly.

For more questions and answers, registered users on the BTER Foundation's website can download the free patient brochure "Is MDT for Me?"

necessary. You might want to download maggot-therapy reimbursement statements from your facility's common insurers, or access the reimbursement information available on the BTER Foundation website. The Foundation even provides patient assistance grants for patients without insurance or whose insurance declines to pay.

Recruiting and educating patients

Most wound care patients don't have trouble accepting maggot therapy—especially those with foul-smelling, draining, activity-impairing, limb-threatening wounds. Many have endured or may be facing surgery or even amputation. For them, wearing a dressing with maggots for 2 days may be no big deal, particularly if they understand the potential benefits.

One of the keys to interacting with patients successfully is to show you're comfortable with maggot therapy yourself.

Play down the negative

One of the keys to interacting with patients successfully is to show you're comfortable with maggot therapy yourself. Don't tell a patient, "I know this sounds gross, and you're probably not going to like what I'm about to suggest, but..." If you do this, the patient is likely to respond, "Maggot therapy? That sounds gross and I don't like what you're suggesting."

Don't put a "nonbeliever" in charge of discussing maggot therapy with patients, and don't give patients the idea that you expect them to find it repulsive. Instead, present the option matter-of-factly or even enthusiastically, as you would any other medical option: "I think maggot therapy might help. Let me explain the benefits, risks, and alternatives."

Anticipate that most patients will have questions, and be prepared to answer them. (See *How to answer commonly asked patient questions*.) An effective means of education is to have former MDT patients speak to MDT candidates. A registry of former patients willing to volunteer as educators or interviewees can be a valuable adjunct to your maggot therapy service. Brochures, video testimonials, and other materials also can aid patient education.

A few weeks of solid preparation up front can save you months of drawn-out discussions about the benefits of an MDT program with administrations. Instead, you'll be able to spend this time providing patients with the benefits of maggot debridement. ■

Selected references

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. 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 October 5, 2014.

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

The authors work at the BioTherapeutics, Education & Research (BTER) Foundation in Irvine, California. Ronald A. Sherman is director. Sharon Mendez is a member of the board of directors. Catherine McMillan is a research intern.

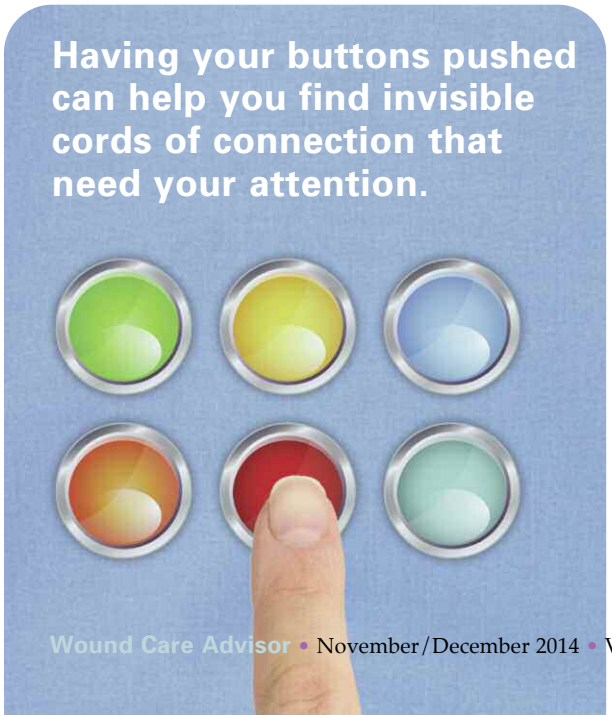
What to do when someone pushes your buttons

By Laura L. Barry, MBA, MMsc, and Maureen Sirois, MSN, RN, CEN, ANP

Why is it that some things don't bother us, while other things catapult us from an emotional 0 to 60 mph in a heartbeat? We all know what it feels like when someone says or does something that gets our juices flowing. We feel it in our bodies, emotions, and mood. We have an overwhelming urge to react. We may express it in words at the time or take our frustrations out later on someone else. It just doesn't feel good. We want to explode, set the record straight.

If the button pusher is your boss, you may internalize your reaction. Your mind is still buzzing with what you'd like to say, but you're not likely to express those angry words to a superior at work. On the other hand, if the button pusher is a significant other, colleague, child, or friend, you may choose not to hide your feelings. Perhaps you'll have a minor explosion and let them know how you feel.

Having your buttons pushed can help you find invisible cords of connection that need your attention.



But what are you really reacting to? You might think it's the situation at hand, but it isn't. Instead, you're reacting to something about that situation. Maybe it reminds you of a past emotional wound. Perhaps you're interpreting it in a certain way. Whatever it is, it's usually something deeper. When someone pushes a button, there's always more to the story than just the current situation.

Having our buttons pushed is uncomfortable, and we'd prefer to avoid it. But the truth is, we can't avoid it. It will happen again and again, each time building on the last. So instead of trying to avoid it, try to embrace it.

Pause and dig deeper

The next time someone pushes one of your buttons, don't react instinctively. Instead, pause for a moment and dig deeper to try to find the cause of your reaction—something beneath the surface that needs to be excavated and studied gently.

Often, when a button gets pushed, we blame the button pusher for how it makes us feel—for what that person did to us to cause this reaction. We externalize the issue and don't take responsibility or own what our bodies are telling us. (See Button pusher as teacher.)

But what if we looked at our buttons in a whole new light? Instead of hiding them and never knowing when and where they will be pushed, what if we unearthed them and shone light on them?

To look at a situation honestly and gently requires compassion toward yourself. Getting to what's beneath the issue at

Button pusher as teacher

It's hard to like someone who pushes your buttons. But what if you view this person as your teacher—someone whose role is to help you dig deeper to find the cords that keep you tethered to hurt, disappointment, fear, or anger? When you pause to view this other person as your teacher, you shift and soften. You step out of the victim role. In this softness, healing can begin.

Pausing gives you the space and opportunity to see things differently, to operate out of love—not anger, the past, or fear. Instead, you're operating out of love for yourself. As you look on the other as your teacher, you may feel gratitude for that person—or perhaps even love.

hand or the surface emotion is a growth opportunity. It gives you the chance to look at the situation differently. It means you've opened yourself up to learning and healing.

Unearthing unresolved wounds

Recently, a most tender button of mine was pushed; someone made a comment that was unexpected and unappreciated. That's it. But it really bothered me. I immediately thought, "This person always does this to me…never has anything nice to say. This feels humiliating."

I restrained myself from responding (although I'm sure my body language and facial expression spoke volumes). Instead, I paused, and once I was away from that person, I did some deep breathing to release my feelings. I thought about what was said and how I felt. During that pause, I realized my body was telling me there was more to this than just the unappreciated comment. I realized the intensity of my feeling was out of proportion to the comment.

As I let myself sit with this disturbing emotion, I asked myself, "Why does this bother me?" I realized it bothered me because it made me feel I hadn't been heard. So what does that mean and where else in my life do I feel I haven't been heard? As I continued to dig, I remembered many of the other times I'd felt this way. I realized that not being heard is an old wound coming from my childhood in a big family. To me, not being heard means not being loved or cared about—or at least that's how I interpreted it.

The current issue had brought up those old, unresolved hurts and beliefs from childhood so they could be healed. As an adult, I can look back at that childhood "me" who was hurt and tend to the wound so it doesn't have to keep resurfacing at unpredictable times. And when it does arise, I can lovingly say, "Oh, it's you again." I can pause, honor my feelings from the past, and give myself permission to feel what I'm feeling. I can remind myself that this is an old wound surfacing now for healing.

This perspective helps me realize the experience is happening for me, not to me. That shift in my perspective allows room for investigation, curiosity, and most importantly, healing. When something happens for me, it implies it's good; when it happens to me, I'm a victim. "For me" comes with intention and purpose. "To me" comes with blame and hurt.

Cords of connection

In a sense, invisible hollow cords connect us to every experience and relationship from our past. Even when an experience or relationship is complete (perhaps you'd describe it as "over"), those invisible cords of connection remain. I use the word complete rather than over because when we complete something, we acknowledge a finality, sometimes with a sense of accomplishment, and move to the next door that's

opening. We complete grade school and move on to high school. We complete an exam and become certified in a field. We complete grocery shopping and go home to make dinner. Complete removes judgment.

The invisible cords of connection can be a drain if they are cords of fear, anger, hurt, resentment or if they carry a "should-have" implication. Those cords need to be cut—with kindness—by a willingness to look deeper into our reactions. They're energy drains. When the function of the umbilical cord is complete, it must be cut for the greatest good of mother and child. So, too, with past experiences or relationships that are complete. For the greatest good of all involved, the cord that no longer serves a loving, peaceful purpose must be cut. Only cords of love, compassion, peace, and joy can sustain.

Pause, digest, reflect, and respond

Having your buttons pushed can be a wonderful way to find out what invisible cords of connection need attention. Through a willingness to excavate the underlying cause of our reaction, we begin the healing process.

So for today, I will notice and be grateful when someone pushes my buttons. I will pause, digest, reflect, and respond. Knowing it's being done for me and not to me, I'll be grateful for the growth and awareness it can bring, grateful that my body speaks to me.

And you? What buttons will be pushed for you today? When they are pushed, will you pause, digest, reflect, and dig deep to find the cause of your reaction? Will you cut the invisible cord? ■

Laura L. Barry is business consultant and leadership coach. Maureen Sirois is a nurse consultant on health and wellness.

Make your patient-teaching idea a patented reality

One nurse turns her innovative idea into a successful business.

By Joy Hooper, BSN, RN, CWOCN, OMS

Have you ever had an idea for improving patient care that you wanted to market? You may have lacked confidence or know-how, as I once did. But one patient, a crafty idea, and a trip to Walmart put me on the path to becoming a successful nurse entrepreneur.

A challenging patient

Several years ago while employed as an

Anatomical Apron

The author successfully created and marketed this Anatomical Apron, which is used for patient education.

ostomy nurse in an acute-care hospital, I worked with a challenging patient who changed my career path. It was my job to teach patients and willing family members how to manage the new ostomy. This particular patient was distraught about having an ileostomy and a new diagnosis of end-stage renal disease, so was not ready to learn the skills I needed to teach him.

I wished I had a visual teaching tool to use as I explained his surgery. The problem was I couldn't find any such tool. I searched endlessly online and in every educational resource I could find, but came up empty-handed.

Push came to shove, as they say, on a Friday afternoon when the patient not so politely asked me to leave his room. He told me in a not-so-kind tone, "I don't want to hear anything about this ostomy thing. Thanks but no thanks."

I had no choice but to try and make my own teaching tool; I knew what I wanted—a teaching tool that would help me explain how the GI tract functioned before ostomy surgery. I wanted to be able to explain the different parts and their function in practical terms, such as, "This is the small intestine; it eats for you by absorbing the nutrients from the food you eat" and "This is the large intestine; it drinks for you by absorbing the liquid as it passes through" so patients would understand how the surgical changes would alter their digestive process.

I also wanted to be able to explain how the surgery was done and to show the end result—a stoma on the abdomen. I wanted it realistically proportioned to the adult human body so the patient would have a practical point of reference to his or her body.

Inspiration strikes

Over the weekend, as I was thinking of how I could make the teaching tool, I decided to bake a batch of cookies to get my creative juices flowing. As I put on my apron, an old-fashioned, full-length hand-me-down from my aunt, it hit me: I could make an apron with the GI tract on it! I remember taking off the apron and telling

my husband, "No cookies today; I'm headed to Walmart."

After buying a craft apron, red felt, and some glue, I returned home and started designing a GI tract on the front of the apron. I cut the bottom off the apron and used the fabric to create two small flaps to simulate the front of the abdomen. Since I could only sew a straight stitch, I asked my mother to sew a couple of buttonholes on the front of the apron. I designed the apron so that I could explain a colostomy and an ileostomy. When it was finished, I had the teaching tool I had envisioned.

Introducing the tool

I took the apron to work the next day and used it with my patient who had asked me to leave his room only days before. I walked in his room wearing the apron and explained the digestive process, never giving him a chance to stop me. I was speaking so fast and with so much excitement that he just lay there, eyes wide open, staring at my white apron with the bright red GI tract.

I finished explaining the digestive process and was launching into how stoma surgery was preformed when he slowly began to sit up. By midway through, he was sitting upright on the side of the bed and I realized I had 100% of his attention. He listened intently as I explained how his GI tract had been changed and how his large intestine was no longer able to "drink for him" as it had done before. When I had completed my explanation of his surgery, I asked if he had any questions. He pointed to my apron and asked, "Yes, did you make that thing?" I replied "Yes, I made this just for you." His response was, "Well, you need to patent that because you sure just taught me something."

I used the apron with several patients and family members before I had the courage to show it to other healthcare professionals. My nurse colleagues said, "You need to patent that." I had no idea how to patent something, so I always just laughed off the thought. Then one day a surgeon came into a patient's room while I was using the apron to teach. After I finished, he followed me out of the room to tell me what a great idea the apron was and that he had never seen anything like it. He encouraged me to develop the design further, then make and distribute the aprons so others could benefit from them as well.

I used the apron with several patients and family members before I had the courage to show it to other healthcare professionals.

On the patent path

I was excited but still lacked the courage to move forward. Then a few months later I ran into my WOCN instructor at a regional conference and told her about the apron and how much it was helping me to teach anxious patients. With a big smile she said, "Bring it up and show it to me." Within a few weeks I visited her, apron in hand. Her response was to tell

me to keep the project confidential until I had applied for a U.S. patent number to protect my idea and design. (For more information about patents, go to the **United States Patent and Trademark Office**.)

I worked and reworked the apron design several times and, with the help of a creative friend, decided on a final version. (See *Anatomical Apron*.)

I didn't know anything about obtaining a patent but luckily I was surrounded by friends and family who encouraged me to learn the process. Through friends, I connected with two people in my town who owned patents on products they had developed. One patent was for a closure on a tracheostomy collar and the other patent was for templates for football plays. I spoke to the men about how they had obtained their patents. Both gave me leads on patent attorneys, also known as intellectual property attorneys. It turned out the patent attorneys had retired, but the contacts led me to two intellectual property attorney groups. I spoke with attorneys from both firms about my design and had an immediate connection with one of them.

I worked with the attorney on diagrams and descriptions of my apron and how it was constructed. It took months before we were able to file. We filed for the patent in October 2004. I thought since it was the only thing like it in the world I would go through without a problem. Little did I know I was beginning a 4-year-long journey to reach my goal.

Persistence pays

While the attorney was working on the patent, I started looking for a manufacturer for the aprons. Locating sewing manufacturers is difficult because many textiles are made outside the United States. Fortunately, I found a manufacturer 30 miles from my home.

The attorney filed the patent three times over the next 4 years before it was approved. I attribute the approval to a YouTube video I had posted using the apron to explain colostomy surgery. My patent had been denied twice before because the patent reviewer saw the openings on the abdominal flaps as buttonholes, which they are. I needed him to see them as openings into the abdomen. While on a three-way phone call with my patent attorney, the patent reviewer, and me, the reviewer watched my YouTube video. The video brought the apron to life, and he no longer saw the buttonholes as simple buttonholes. The reviewer agreed to grant my patent.

My attorney patented not only the apron but also the method I use to explain the surgery. This means that anyone who makes an apron duplicating mine and uses it the same way I use mine to teach the surgical process is infringing on my patent claims and risks prosecution.

View: Anatomical Apron

Success!

I now sell my Anatomical Apron via the Internet all over the world from my website, **www.apronsbyjoy.com**. Ostomy nursing is not only my passion; I feel it is my calling and enjoy every minute I spend teaching how the surgery changes the body. ■

Joy Hooper is owner and manager of MedicalCraft, LLC, in Tifton, Georgia.

Clinician RESOURCES

Here is a list of valuable ostomy resources, some suggested by our colleagues who follow *Wound Care Advisor* on Twitter.

United Ostomy Association of America

The **United Ostomy Association of America** provides comprehensive resources for patients, including information about the types of ostomies and issues related to nutrition, sexuality, and travel. Much of the information is also available in Spanish and can be downloaded for free from the website.

National Comprehensive Cancer Network

Many patients who have an ostomy do so because of cancer. It's important that clinicians understand the treatment patients receive. One resource is the National Comprehensive Cancer Network (NCCN), which has guidelines for treating various types of cancer, including colon cancer. NCCN has information for both patients and healthcare professionals, including pocket versions of the guidelines. Free registration is required to access the material.

National Guideline Clearinghouse

Part of the Agency for Healthcare Research & Quality, the **National Guideline Clearinghouse** makes it easy for clinicians to search for evidence-based guidelines related to the care of patients with ostomies. Clinicians can also read expert commentaries, access guideline syntheses, and compare multiple guidelines to easily assess similarities and differences.

Experts

Certified wound care nurses provide a high level of expertise that clinicians can tap into, while patients with ostomies can offer key insights and practical tips. In addition, companies that sell ostomy products often have valuable education material. ■

NAWCO NEWS

Note from Executive Director

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

National Alliance of Wound Care and Ostomy®

As I write this, I am still feeling the energy from the 11th annual Wild on Wounds Conference. What a great group of wound care clinicians. With close to 1,000 attendees, the conference was fun, friendly, and jam-packed with sessions for all levels of clinicians, from beginners to advanced. Many of the attendees shared their frustrations in choosing one session over another with comments such as, "It was so difficult because of all of the great educational offerings."

Once again, the National Alliance of Wound Care and Ostomy (NAWCO) had an answer table set up in the registration area. We enjoyed the many inquiries we received, and it was nice to put faces with names.

Each year, NAWCO gives four awards to deserving clinicians who put their hearts and souls into their work. We have so many talented and committed certified wound care clinicians that it seemed only fitting to recognize these talented people and give them the opportunity to shine. These individuals are nominated by their colleagues, coworkers, peers, and subordinates, and we had an abundance of nominations. While we would have loved to recognize all of the nominees, the committee could choose only four.

During the closing session, appropriately titled "Pay it Forward," NAWCO recognized these four exceptionally talented, committed, hard-working clinicians for their achievements in their work with wound care patients. I wanted to share some of the impressive comments made about the award winners.

Outstanding Work in Diabetic Wounds: Anna Ruelle, DPM, WCC

- "Voted 'top doctor' 11+ years in a row by peers"
- "Greatly reduced the incidence of below-the-knee amputations and loss of limb"
- "Never lets the sun set on a diabetic ulcer or wound when a patient calls."

Outstanding Research in Wound Care: Michael Katzman, RN, BSN, ONC, WCC

- "Known for his expertise in wound care and for being very approachable, professional, and a mentor to others"
- "Works collaboratively with other hospital skin champions to develop a protocol to prevent and treat skin tears through evidence-based research"
- "Offers regular in-services while collaborating with others to continuously improve outcomes."

Outstanding WCC of the Year: Chelsey Hawthorne, RN-BC, BSN, WCC

- "Serves as one of the certified nurses in a long-term care facility, and is a resource for the medical-surgical and other skilled units"
- "Works with the Magnet® Program supervisor to assist in getting more nurses certified through NAWCO"
- "Collaborates with the health system's

wound care clinic to ensure proper delivery of care to the residents."

2014 Scholarship sponsored by Joerns® RecoverCare: Craig Johnson, RN, BSN

- "Serves as staff nurse at a busy skilled nursing facility with a diverse and complex veteran population"
- "Demonstrates an overwhelming and sincere interest in wound care"
- "Designed and developed a mobile Wound Cart, which is used as a tool in the unit's Wound Rounds Process."

NAWCO is proud and honored to recognize the achievements of such a dedicated group of wound care clinicians. All of us at NAWCO congratulate the 2014 award winners.

New certificants

Below are WCC, DWC, and OMS certificants who were certified from June to September 2014.

Aileen Abellar
Angela Ackerson-Henry
Junielon Adame
Mary Alexander
Jodi Alexander
Jemima Alexis
Jessica Allen
Kathryn Altman
Jennifer Altmann
Susan Anderson
Adelle Anderson
Sandra Andes
Cynthia Andrews
Rowena Anselmo
Stacey Arakawa
Donny Ard
Rosa Arias-Parsley
Lisa Arlia
Jennifer Armstrong
Kellie Arnold
Kimberly Arsenault
Catherine Asack
Jeanna Ashford
Laurie Ashley
Sue Asmus
Deborah Aureliano
Janet Azulay
Kathleen Babineau
Tracie Babler-Schneck
Katherine Baker
Michael Baker
Xiao Bao
Magdalena Baranowski
Jacqueline Barbeaux
Catherine Barboza
Rayetta Barnhardt
Cheryl Barron
Jennifer Bartlett
Carl Bauer
Lindi Bay
Kamy Beard
Craig Becker
Alicia Becker
Michael Bell
Joseph Berryman
Velinda Betancur
Melinda Bettencourt
Melissa Betts
Mary Blackmore
Allison Blake
Ingeborg Bloomberg
Cherity Bloom-Miller
Claudette Blowe
Jennifer Booker
Jade Bowerbank
Brittany Bradway
Jessica Brantner
Tiffany Bratz
James Brezinski
Mary Brightwell
Jennifer Brokaw
Candance Brown
Samuel Brown
Deborah Brown
Wendy Brown-Daugherty
Deborah Bucsek
Nina Bun
Linda Busch
Regenia Butler
Eugene Butta
Julie Byers
Edgar Camargo, MD
Olivia Canfield
Kimberly Card
Jaime Carney
Claudia Castellon
Andrea Castilla
Ashley Chambers
Sabine Charles-Arbouet
Jean Cherry
Marcia Chevaleau
Josephine Collins
Heather Collins
Jaline Coman
Erin Conard
Kimberly Coneeny
Stephanie Connor
Jenta Connor
Ashley Conradt
Pamela Copass
Sarah Costello-Yarter
Kelli Cronin
Dorothy Cupich
Kim Cuthbertson
Kim Cygan
David Daniel, MD
Susan Darmstadter, MD
Richard de Leon
Priscila De Ocampo
Kelly Deacon
Kenia Del Pozo Hernandez
Donna Delowery
Margarita Desser
Jane DeVito
Kathleen Dezzi

Jennifer Di Gravio
Adoree Diaz
Brandi Dillon
Nolan Dinsmore
Samantha Donahue
April Dorney
John Dorsky, MD
Denise Dow
Deborah Dreyfus, MD
Nancy Drinnenberg
Lynnelle Driver
Charlene Dumlao
Susan Dyer
Renata Dziekonska
Dale Eberly
Kristin Egelston
Tammy Egger
Christine Eidson
Christine Eisenmann
Ellen Elwood
Heidi Engeman
Jessica Enriquez
Bertha Evans
Senora Fairchild
Ruthie Faitz
Louise Farney
Holly Feldman
Patricia Ferrante
David Ferrell
Lindsay Ferrell
Katie Fik
Eileen Finnegan
Robert Finnegan
Sara Fischer
Nathana Fisher
Amanda Fizer
Victoria Fleming
Melissa Fogarty
Benjamin Foor
Reynande Francois
Ricky Franklin
Cathy Fugate
John Furgason
Kimberly Gahan
Jessica Gallagher
Katherine Gamble
Hellen Gathingo
Olivia Gattozzi
Michelle Gavin
Lorraine Gendreau
Michelle Gilbert
Timothy Gill
LaTonja Gipson
Lucia Gleason
Kaitlyn Golkin
Marcella Gomez
RosaIcela Gonzalez Ruiz
Rachel Goodenough
Debbie Gould
Jessica Grace
Linda Gradozzi-Unsworth
Megan Gradwell
Kyna Graus-Zimmerman
Dawn Green
Lora Green
Mandie Grimmett
Gina Grosh
James Gruebner
Kathy Guffie
Mayra Guiliani
Liauw Gunawan
Cindy Gustafson
Tawanda Hale
Tiffany Hall
Nico Halter
Valerie Hamel
Linda Hanratty
Glenna Hare
Elizabeth Hartbeck
Yvette Haynes
Karen Hebert
Jana Hechler
Lori Hellberg
Linda Henderson
Celeste Hendricks
Susan Herman
Brenda Higgins
Christine Higgins
Jessica Hinson
Jennifer Hodor
Heather Holcomb
Jeff Holdefer
Elizabeth Holland
Gretchen Homerick
Christina Hutchinson
Kim Huynh Bomberry
Angelica Ignatescu
Amal Iman
Alyson Ishihara
Debra Jackson
Lorraine Jahnke
Jerri Jakich-Ortiz
Nancy Jameson
Deborah Jawin-Sheak
Yveda Jean-Baptiste
Baldat Jeenarine
Tracey Jimenez
Tara Jochum
Kerry Johnson
Marketa Johnson
Billie Johnson-Casinelli
Sharmin Jones
Shannon Joyce
Kristin Joyce
Gloria Kabia
Margaret Kaiser
Lysette Kamzelski
Danielle Karasko
Rose Kasarda
Virginia Kaufman
Sukhdeep Kaur, MD
Deirdre Keane
Meagan Kearney
Deborah Kearns
Kristen Kearns
Justina Kennde
Christy Kennon
Julie Kenyon
Anita Keogh
Milly Khan, MD
Jennifer Killingbeck
Katherine King
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Lisa Kmieciak
Ryan Kobayashi
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Victor Koivisto
Renee Krisky
Lynn Kuklinski
Kimberly Kunkel
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Novelette Lamey
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Annette Lance
Florence Lannan
Malori Larson
Tina Last
Vicki Lavoie
Kristin Law
Donna Leigh
Michele Leuthauser
Shelley Licht
Reid Lofgran, DO
Nakia Long
Kellie Longs
Theresa Luffey
Natasha Lum
Linda Lyons
Carol MacDonald
Rondi Mahoney
Beverly Manno

Stephanie Mansfield
April Manuel
Jennifer Marcelin
Vicci Marcotte
Lisa Marshall
Diana Martil
Tanya Martin
Gail Martin
Sonia Martinez
Macy Massey
Leanne Mathis
Juliet Maxcy
Nicole Maynard
Lacy McBride
David McCall
Deborah McCarthy
Leah McCarthy
Karen McDonald
Kristy McDonald
Lisa McDonough
Amber McGee
Kristine McGrath
Kristie McGuire
Patricia Mclaughlin
Gail McLaurin
Bridget McShea
Lori Meadows
Annalisa Medina
Cherry E Medina
Santiago Medrano
Stephanie Medrano
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April Meyer
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Shawn Miley
Andree Milkowski
Lucas Miller
Deborah Miller
Tanya Miller
Debra Miller
Regina Mingus
Susan Miskar
Carol Mizelle
Jessica Moore
Kayla Moreno
Shalonda Morton
Kevin Moya-McKay
Trena Moyer
Myra Nacis
Jill Nakayama
Tran Nghiem
Susan Nguyen
Robert Nichols
Veronica Nickelsen
Cathyan Nickrand-LaGreca
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Katherine Ross
Donald Ross
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Michelle Rung
Joan Sadlow
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Beverly Strickland
Angela Stumbo
Jennifer Sutton
Diane Swanson
Diane Swanson
Shannon Szrankowski
Rami Taha, MD
Shamim Tariq
Nancy Taylor
Dawn Teune
Susan Thomas

Ada Thomas
Mary Titus
Josephine Tolentino
Andrea Tomczak
Amir Torres
Fernando Torres Martinez, MD
Cheryl Tracey
Susan Travers
Rachel Tripp
Lisa Trott
Kirbie Tucker
Stacey Twiggs
Diana Tyrrell
Crystal Ulbright
Cheryl Urena
Kimberly Valente
Erica Vandenboss
Katelyn Vaughn
Jean Velarde
Nichelle Vigil
Kathleen Villarreal
Sarah Villers
Joy Wada
Sarah Wanat
Hailan Wang
Cathryn Warmerdam
Debra Weaver
Kathie Weber
Pamela Welch
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Timothy Widlic
Sheila Willer
Elizabeth Williams
Leslie Williams-Sipley
Pearletha Wilson
Raeann Wisher
Latrese Wonderly
Becky Wright
Dawne Yankasky
Jealyn Yap
Carol Yoneyama
Nancy Zavala
Jennifer Zeigler
Rochelle Zinke

Recertified certificants

Below are WCC, DWC, and OMS certificants who were recertified from June to September 2014.

Vance Abshire
Leslie Christine Acosta
Trellis Adams
Linda Adams
Merla Agsalud
Elaine Agustin
Josefina Alberto
Dilek Alkan
Margaret Almeida
Leslie Almroth
Paula Anderson
Angela Anderson
Anna Angle
Velda Arrington
Jeannine Ashcom
Lea Atanoso
Sharon Atwood
Deborah Bailes
Melanie Bailey
Sally Bame
Shannon Barnes
Teresa Barnes
Carrol Barrie
Josephine Basilio
Pamela Behrens
Conswaylla Bell
Oren Bennett
Gail Bennett
Cornelia Benoit
Francisco Berio Roussel, MD
Dharmesh Bhakta, DPM
Susan Bickel
Renee Bielinski
Janet Bitters
Dawn Bjorge
Danielle Blood
Jessica Blough
Noeme Borro
Florica Botas
Lisa Brady
Jennifer Bridges
Timothy Britton
Loridan Bromberek
Christy Brown
Nenette Brown
Maria Brzazgon
Nancy Bullen
Judith LaDonna Burns
Jerri Burrows
Jacqueline Cabral
Susan Cacciola
Deborah Calvaresi
Sharon Carlson
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Karen Celebucki
Irma Cepeda
Gino Cesari
Theresa Chang
Corinne Cintron
Pamela Clark
Jill Clites
Shelly Cochran
Sharon Cohen
Laura Colburn
Teresa Conerly
Jami Conley
Jennifer Cordle
May Corpin-Alabado
Donna Costantino
Joan Cowling
Marlyce Cozart
Beretta Craft-Coffman
Yong Crandall
Sara Cranford
Ritche Cronologia
Dawn Crosby
Melvyne Cueto
Darlene Cummings
Sondra Darby
Sue Dariz
Donna Davis
Susan Deeren
Janet DeFrancesco
Vincenne Deitsch
Cynthia Dekowski
Michelle Del Guidice
Alberto Dela Cruz
Ericka Denson
Nancy DeSimone
Jennifer DeTurk
Arlynne Devirgiliis
Diane Doyle
Barbara Duerksen
Calvin Dull
Sara Dye, MD
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Bonnie Eastman
Magda Echevarria
Rita Echols
Mardie Ellington
Charlyn Emfinger
LaMissa Ennis
Susan Erskine
Susan Fargo
Diane Featherston
Mary Flaherty
Lisa Fontenot

Mary Ellen Forster
Sonya Foster
Polly Frank
Janeen Fraser
Diane Freeman
Karen Freeman
Maria Freidlund
Jenna Freund
Nancy Fridley
Fedes Marie Galutan
Lilibeth Gaminde
Steven Gartland
Bonita Gausman
Connie Gentry
Lizabeth Gentry
Kathleen Gepford
Joyce Gerodias
Roxie Gifford
Julie Glendenning
Bette Gordon
Teresa Granados
Patricia Greene
Tracie Greer
Lori Grider
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Priscilla Harris
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Claire Hoff
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Judith Jacques
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Mavis Jaworski, MD
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Susan Kamovitch
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Mellisa Kasdras
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Jane Kenny
Louise Kenton
Patricia Keortge
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Nelly Lugo De Vallin
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LaVeda Raymond
Japonesa Read
Brenda Reel

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Sherry Risman
Rochelle Rolfe
Marie-Michelle Rousseau
Tami Ruris-Kanegae
Penelope Sacks
Lana Sanders
Amanda Savage
Sonnya Sayles-Ghauri
Priscilla Schilling
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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 LLE℠s, 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.**

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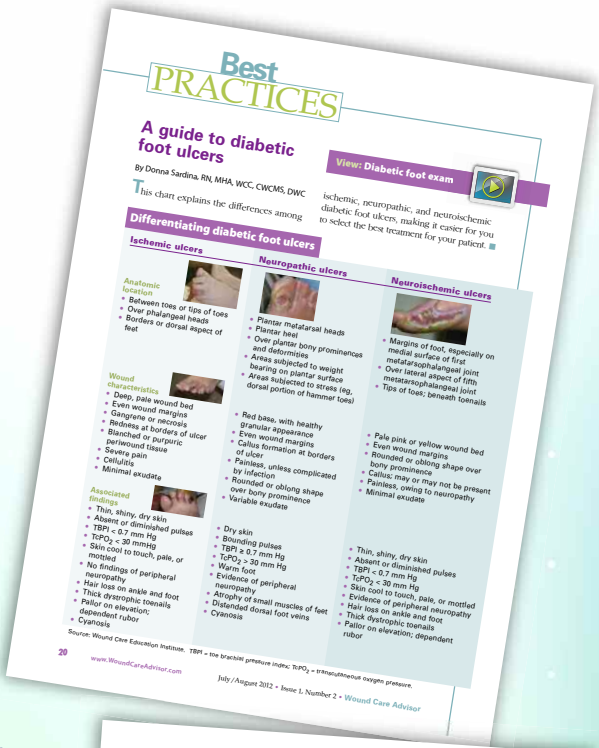
Best PRACTICES

A guide to diabetic foot ulcers

View: Diabetic foot exam

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

This chart explains the differences among ischemic, neuropathic, and neuroischemic diabetic foot ulcers, making it easier for you to select the best treatment for your patient.

Differentiating diabetic foot ulcers

	Ischemic ulcers	Neuropathic ulcers	Neuroischemic ulcers
Anatomic location	• Between toes or tips of toes • Over phalangeal heads • Borders or dorsal aspect of feet	• Plantar metatarsal heads • Plantar heel • Over plantar bony prominences and deformities • Areas subjected to weight bearing on plantar surface • Areas subjected to stress (eg, dorsal portion of hammer toes)	• Margins of foot, especially on medial surface of first metatarsophalangeal joint • Over lateral aspect of fifth metatarsophalangeal joint • Tips of toes; beneath toenails
Wound characteristics	• Deep, pale wound bed • Even wound margins • Gangrene or necrosis • Redness at borders of ulcer • Blanched or purpuric periwound tissue • Severe pain • Cellulitis • Minimal exudate	• Red base, with healthy granular appearance • Even wound margins • Callus formation at borders of ulcer • Painless, unless complicated by infection • Rounded or oblong shape over bony prominence • Variable exudate	• Pale pink or yellow wound bed • Even wound margins • Rounded or oblong shape over bony prominence • Callus; may or may not be present • Painless, owing to neuropathy • Minimal exudate
Associated findings	• Thin, shiny, dry skin • Absent or diminished pulses • TcPO2 < 30 mmHg • Skin cool to touch, pale, or mottled • No findings of peripheral neuropathy • Hair loss on ankle and foot • Thick dystrophic toenails • Pallor on elevation; dependent rubor • Cyanosis	• Dry skin • Bounding pulses • TBPI ≥ 0.7 mm Hg • TcPO2 ≥ 30 mm Hg • Warm foot • Evidence of peripheral neuropathy • Atrophy of small muscles of feet • Distended dorsal foot veins • Cyanosis	• Thin, shiny, dry skin • Absent or diminished pulses • TBPI < 0.7 mm Hg • TcPO2 < 30 mm Hg • Skin cool to touch, pale, or mottled • Evidence of peripheral neuropathy • Hair loss on ankle and foot • Thick dystrophic toenails • Pallor on elevation; dependent rubor

Source: Wound Care Education Institute. TBPI = toe brachial pressure index; $TcPO_2$ = transcutaneous oxygen pressure.

20 www.WoundCareAdvisor.com July/August 2012 • Issue 1, Number 2 • Wound Care Advisor


Business CONSULT

"But I left voice messages and a note…"

By Nancy J. Brent, MS, RN, JD

Often nurses get named in a lawsuit when they are involved in clearly negligent conduct that causes an injury to or the death of a patient. Examples include administering the wrong medication to the wrong patient or not positioning a patient correctly in the operative suite prior to surgery. Sometimes, however, the negligent behavior of a nurse is not as clear to the nurse involved in the care of the patient.

That was apparently the circumstance in the reported case, *Olsten Health Services, Inc v. Cody*.[1] In September 2000, Mr. Cody was the victim of a crime that resulted in paraplegia. He was admitted to a rehabilitation center and discharged on November 15, 2000. His physician ordered daily home health care services in order to monitor his "almost healed" Stage 2 decubitus pressure sore.[2] The home health care agency assigned a registered nurse (RN) to Mr. Cody and, after Mr. Cody's health care insurance would not approve daily visits, a reduced visit plan was approved by Mr. Cody's physician.

A progressive problem

On November 16, 2000, the nurse visited Mr. Cody for the first time. During that visit, she did an admission assessment and noted that the pressure sore, located at the area of the tailbone, measured 5 cm by 0.4 cm wide and 0.2 cm deep. She believed the pressure ulcer could be completely healed within 3 weeks. The nurse called Mr. Cody's physician and left him a voice message concerning her visit and her findings.

On November 19, a second visit took place and the nurse observed and documented that Mr. Cody's pressure sore was "100%" pink and no odor was detected.

On November 20, she attempted another visit but did not see Mr. Cody because the front gate surrounding his home was locked. The nurse buzzed the gate doorbell several times to no avail. She left a note on the front gate for the Cody family and left a voice message for Mr. Cody's physician.

The next visit took place on November 21. The pressure ulcer was now only "90% pink" and had a "fetid" odor; this condition did not improve over the next 24 hours. The nurse documented this fact in her nurses' notes. Again, she left a voice mail message for the physician concerning these findings.

32 www.WoundCareAdvisor.com July/August 2012 • Issue 1, Number 2 • Wound Care Advisor


"Mom, I miss you so much…"
Type 2 diabetes steals the lives we cherish most.
Nearly a quarter million a year. But it can be prevented.
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