

VOLUME 1 ISSUE 2 NOVEMBER 2012

# ARTERIAL VS VENOUS WOUNDS

WHY IT IS IMPORTANT TO KNOW!!!

### From the Editor

#### Teresa Matthews, FNP-C, CWCN, RN

Welcome to the second edition of The Healer. Our pressure edition was a success. I am energized by everyone's overwhelming support. This education is now present in several states, and I predict an international market in the near future.

I chose this quarter's topic "Arterial Wounds vs. Venous Wounds" due to many reasons. First and foremost is increasing litigation due to limb loss. While that alone would substantiate intense research, I also know how expensive these chronic wounds can be. However, the most important challenge is the patient. Last month, one of my patients informed me that his leg wound had been there for over ten years. I assessed it and assured him we would have it healed before he was discharged. He scoffed at the idea, and I offered him a wager. If I could heal that leg wound before his discharge in three weeks, he would give me a dollar. He took a crumpled dollar bill and put it in his top drawer in his room at the nursing home. He told every staff member about the bet, and warned them not to touch his dollar. I now have that dollar bill proudly framed in my office, as he happily lost the bet. These wounds can indeed be healed.

Effectively treating chronic wounds has long been an issue of review. The time and expense associated with chronic wound care staggers our medical system. The current practice of treating the wounds topically only contributes to the chronicity. Only when we begin to holistically treat the patient as a whole and solve the underlying issue can a chronic wound move through the stages of healing.

This is true with any wound, not just an arte-

rial or venous wound. For example, when your Supply Officer complains about the amount of hydrogel product you are going through for your arterial/diabetic wounds, a holistic provider will begin to address the high accu-check levels in the facility. When the Calcium Alginate dressings begin to run out for all of your venous wounds, the critically thinking nurse will begin to care plan interventions to include daily elevation of lower extremities. It may sound like simple common sense, because it is simple common sense. We can treat wounds forever, but healing wounds is our goal.

There is an increasing number of patients on my current rounds with a mixed etiology of lower extremity wounds. They have wounds that appear as arterial, and they have wounds that appear as venous. Why would we want to know this? I am seeing an alarmingly number of physicians order compression therapy before ruling out arterial insufficiency. Trust me when I say, you do not want to compress or extensively elevate an arterially insufficient limb. Arterial insufficiency trumps venous insufficiency every day of the week! When a limb is at risk for loss, your priorities shift. Frequently, I am seeing physicians focus on the heavily exudating large wound, request debridement, compression, and elevation, while totally missing the small arterial wound. Simple ankle/brachial testing may have prevented that impending lawsuit.

So sit back, grab a cup of tea, and enjoy the 2nd edition of The Healer. And remember, this publication is named after you.

#### IN THIS ISSUE

HYPERBARIC OXYGEN....4
ARTERIAL WOUNDS.......6
USING AN ABI...............8
VENOUS CASE STUDY.....11
VENOUS VS. ARTERIAL .12
UNLIMITED TIME OFF....15



Teresa Matthews is the proud owner and sole Nurse Practitioner for Advanced Healing, Inc. She proudly organizes wound rounds at Delaware's long term care facilities, and educates our providers on the honor of caring for our tender elders. Along with house calls and public speaking, this unique practice is endless in possibilities. Teresa earned her MSN from Wesley College and her Post Masters Family Nurse Practitioner from Indiana State University. She is Certified as a Family Nurse Practitioner through AANP. Teresa welcomes comments and offers individual encouragement through www.advanced-healing.net or at her office at (302) 363-5839.

Page 2 The Healer November 2012



#### Cadia Rehabilitation Silverside

3322 Silverside Rd., Wilmington, DE 19810 (opening Nov. 2012)

Nursing Opportunities:

Unit Manager • Nurses (L/RN) • CNAs (all three shifts)

Also seeking: Maintenance Worker • Medical Records Clerk • Office Manager • Nursing Staff Scheduler • Social Worker

Resumes are being accepted at: <a href="mailto:Careers@cadiahealthcare.com">Careers@cadiahealthcare.com</a>

Apply online at <a href="https://www.cadiarehab.com">www.cadiarehab.com</a> (click on CAREERS)



Enzymatically Active • Biologically Selective

Todd Fellenbaum Territory Manager



3609 Hulen Street Fort Worth TX 76107

302 259 8068 Cell Todd.Fellenbaum@healthpoint.com

CONTACT 302-363-5839 TO ADVERTISE WITH THE NEWEST WOUND CARE PUBLICATION AVAILABLE

### **YOUR AD COULD BE HERE!!**

CUTTING EDGE INFORMATION PROVIDED FREE OF CHARGE TO LONG TERM CARE FACILITIES, ACUTE CARE HOSPITALS, AND WOUND CARE CENTERS IN DELAWARE



Search for: Advanced Healing, Inc.

#### **Legal Matters**

#### **General**

The Healer is a registered trademark of the publisher, Pre-Hospital Interventions, Inc., d/b/a Advanced Healing (the "Publisher").

107 Russell Dr.

Milford, DE 19963
© 2012 by the Publisher.

#### **Managing Editor**

Teresa Matthews, FNP-C, MSN, RN, WOCN

#### **Editorial and Peer Review Board**

Kami Jensen Brinkerhoff
Lyron Deputy, MSN, MBA
John Dressler, Jr., MS
Dr. Lucille Gambardella
Mark A Lang, RN, MSN, CRNA
Sharon M. Mills-Wisneski, PhD, RN
Annamarie Pownell, RN
Kristina Smith, MSN, RN, CCM

#### **Advertising**

Please call the publisher at 302-363-5839 for a current rate card.

The Publisher reserves the right to reject any advertisement. Responsibility for errors in advertising is limited to corrections in the next issue, and there are no refunds of price of advertisement. Acceptance of advertising does not imply endorsement or approval by the Publisher of any products or services advertised, the advertisers, or the claims made. The Publisher shall not be liable for any consequences resulting from purchase or use of any advertiser's

products.

#### **Submissions and Content**

Articles appearing in The Healer express the opinions of the authors; they do not necessarily reflect views of the staff, board, or membership of the Publisher. All submitted articles must be original. Authors are responsible for obtaining permission to use any copyrighted material.

All articles will be peer-reviewed and edited as necessary for content, style, clarity, grammar and spelling. While student submissions are greatly sought and appreciated, no article will be accepted for the sole purpose of fulfilling any course requirements.

It is the policy of the Publisher not to provide monetary compensation for articles appearing in The Healer.

THE PUBLISHER IS NOT RESPONSIBLE FOR THE RETURN OR LOSS OF, OR FOR DAMAGE OR ANY OTHER INJURY TO, UNSOLICITED MANUSCRIPTS, UNSOLICITED ART WORK (INCLUDING, BUT NOT LIMITED TO, DRAWINGS, PHOTOGRAPHS, AND TRANSPARENCIES), OR ANY OTHER UNSOLICITED MATERIALS. PLEASE DO NOT SUBMIT ORIGINALS, UNLESS SPECIFICALLY REQUESTED TO DO SO IN WRITING.

#### **Subscriptions**

For subscriptions, address changes, adjustments, reprints, or back issue inquiries, please contact William Matthews at 302-363-5839, or e-mail advanced\_healing@hotmail.com. Please give both new and old addresses as printed on most recent label.

If the Post Office alerts us that your newsletter is undeliverable, we have no further obligation unless we receive a corrected address within one year.

No part of this newsletter may be reproduced without the consent of the Publisher.

#### Disclaimer

The information in this newsletter is for general information and educational purposes only, and should not be construed as medical advice or diagnosis, nor as advice as to treatment of any specific medical condition. The information, opinions and recommendations presented in these pages are not intended to replace the care of your own healthcare providers. Before you make any changes in the management of your health, you should consult your health care provider or other qualified medical professionals.

November 2012 Page 3 The Healer

## **AND THE SURVEY SAYS....**

Arterial and Venous wounds can be misdiagnosed as pressure wounds. This becomes important when claiming a nosocomial pressure statistic. If a wound is diagnosed as a nosocomial pressure wound, the state survey team is charged with a thorough review to determine causative factors. This can create a lot of unnecessary stress. When assessing these wounds, approach them holistically with a thorough understanding of the patient's co-morbidities and pertinent diagnoses. Hot words, such as Diabetes, Peripheral Vascular Disease, Lymphedema, Peripheral Arterial Disease can make us look a little deeper. Examination of the peri-wound is a clear indicator of pressure vs. non-pressure. See the arterial wound pictures in the article "Arterial Wounds: Recognize and Save a Limb." If you only look at the wound bed and location, you may determine it is a pressure ulcer. However, pay close attention to the dry, callous, pale peri-wound. Look for those hot key-words in the diagnosis list. Get another opinion before succumbing to a nosocomial pressure wound!



## **Educating Today's Lifesavers**

Your Source for all Emergency Response Education including

CPR, First Aid, and EMS training

**ON SITE** education means your staff does not have to travel.

Customized Continuing Education.

Call to schedule a class today, do not wait until you are about to expire.

Call Ryan at 302-462-1220



www.advanced-healing.net





Site See Trips

Page 4 The Healer November 2012

## Hyperbaric Oxygen Therapy: A Healing Option for Arterial Wounds

Kathleen Wright, RN, MS, CWOCN, CHRN, APRN

The patient suffering from arterial insufficiency is at high risk for amputation. This is a result of inadequate oxygenation to a chronic non-healing wound. Oxygenation at levels greater than 40mmHg is essential for cellular metabolic function. Tissue ischemia and the resultant hypoxia impair the body's critical cellular activity needed for wound healing. Decreased oxygen levels lower the production of collagen, slow granulation and epithelialization, and impair the bacteriocidal function of leukocytes. (Hunt, 1969).

The use of hyperbaric oxygen therapy (HBO) in the treatment of tissue hypoxia increases tissue oxygen tension to a level sufficient for improved cellular level function. Neovascularization or capillary bed growth is stimulated in areas of ischemia. This enables improved perfusion and much-needed oxygenation for wound healing. Further, HBO enhances fibroblast function and growth factor availability for tissue proliferation. Collagen synthesis and crosslinking is enhanced, enabling granulation and re-epithelialization. White blood cell function is optimized by HBO, deterring wound infection and the downhill trajectory of osteomyelitis. (Baynosa, 2012).

The benefit of hyperbaric oxygen treatment is achieved by having a patient systemically breathing in 100% oxygen in a pressurized environment. The patient lies in an enclosed hyperbaric chamber for a total treatment time of approximately 2 hours.

The actual therapeutic treatment is 90 minutes. It takes about 10 to 15 minutes for the chamber to pressurize at the beginning of treatment, and another 10-15 minutes for the chamber to depressurize at the end of the treatment. In order to understand how hyperbaric oxygen works, it is necessary to review two important laws of physics that enable the positive effects of treatment:

• Boyle's law is that of gas bubble size; this means that the pressure within the hyperbaric chamber increases the size of the oxygen molecules decrease. This allows oxygen to more easily pass out of blood vessels and diffuse into a much greater area of tissue. In fact, studies have shown up to a threefold increase in oxygen diffusion from the circulatory vessels into the surrounding interstitial tissues.

•Henry's Law denotes that higher concentrations of gas will dissolve in a liquid under pressure. Normally, hemoglobin molecules in the bloodstream are fairly well oxygensaturated, but the plasma is a poor carrier of oxygen. This law of physics enables the plasma, in our patients undergoing hyperbaric oxygen therapy, to be hyper-oxygenated (up to a tenfold increase) resulting in very positive outcomes for patients suffering from delayed healing due to tissue hypoxia. Studies have shown that sufficient oxygen can be dissolved in the plasma during hyperbaric treatment to keep tissues alive even without the hemoglobin-borne oxygen. (Baynosa, 2012).

The most typical indications related to tissue ischemia seen for hyperbaric treatment in an outpatient wound healing and hyperbaric center include:

- -Lower extremity wounds in the diabetic population (patients having had at least 30 days of conventional wound care with no progress)
- Wounds complicated by chronic refractory osteomyelitis (patients who had received systemic antibiotic therapy without resolution of infection)
- Compromised flaps or grafts (either in an effort to salvage the area or prepare the site for revision)
- Infected wounds (presenting in the form of gas gangrene, necrotizing infection or actinomycosis)
- Crush injuries (as hyperbaric oxygen therapy inhibits ischemia- reperfusion injury, the resultant edema and tissue hypoxia).

- Non-healing wounds located in tissues that have been irradiated (as the angiogenesis stimulated by HBO improves oxygenation to the affected avascular areas). (Strauss, 2012).

#### **Hyperbaric Benifits and Risk**

Hyperbaric oxygen treatment is not without possible side effects and risks which should be evaluated on an ongoing basis by the hyperbaric clinicians. The most common side effect, seen in less than 1% of patients receiving hyperbaric treatment, is barotrauma. Barotrauma may cause damage to the tympanic membrane when a patient is unable to adequately equalize pressure in the Eustachian tubes. Patients are provided with extensive education on how to "clear their ears" or equalize pressure during treatment, but some may require myringotomy tubes to allow pressure equalization without pain or damage to the eardrum. While some patients may experience fatigue, this may be due to the commitment of coming to the Center daily for their HBO treatments, others have newfound energy levels, as their body is hyper-oxygenated. This is why some athletic teams utilize hyperbaric oxygen to optimize team members' endurance.

Seizures may be experienced by insulindependent diabetic patients whose glucose level drop rapidly during treatment. For that reason, glucose levels are checked immediately prior to treatment and complex carbohydrates may be given if glucose is found to be below 120. Another potential reason for seizures during hyperbaric treatment is central nervous system (CNS) toxicity associated with high level of oxygen; for this reason, patients receiving treatment at 2.5 atmospheres of pressure or higher, receive air breaks during their time in the chamber. Less than one-half of one percent of patients receiving HBO will experience seizures.

Some individuals may experience claustrophobia however, medications can be given

**Continued on Page 5** 



Kathleen Wright, RN, MS, CWOCN, CHRN, APRN Regional Director, Clinical Services

Kathleen Wright, has recently rejoined Nanticoke Health Services as a Wound Care Community Education Specialist. She previously served as Senior Director of Clinical Operations for Healogics, the country's largest provider of contracted ser vices for Wound Care and Hyperbaric Services. During her earlier employment with Nanticoke Health Services, Wright served as Program Director at Nanticoke Wound Care and Hyperbaric Center in Seaford, Del., the first hyperbaric center in the state. With over 35 years of experience in nursing, including service with the U.S. Air Force Nurse Corps, Wright has worked as a Clinical Nurse Specialist for nearly 20 years with a focus in wound, ostomy, and continence nursing (WOCN) and also provides independent WOCN consulting services, including provision of expert witness services on WOCN - related medical- legal cases.

Board - certified in both wound, ostomy, continence nursing and advanced hyperbaric specialties, Wright has served as President of the national WOCN Certification Board (WOCNCB) and on the board for the National Association of Clinical Nurse Specialists. She was awarded the WOCNCB President's Award in Advanced Practice in 2005, and was also peernominated and selected for the Excellence in Advanced Nursing Practice Award in 2003 from the Delaware Nurses Association/Delaware Organization of Nurse Executives. She has published and lectured extensively on WOCN, hyperbarics and advanced practice nursing related topics.

November 2012 Page 5 The Healer

#### **Hyperbaric: Continued from Page 4**

to help them relax. Many patients find after the first few days, that they no longer need the medication and actually sleep during their treatment. (Tsuyi, 2008).

In a recent study by the Lower Extremity Amputation Project group, (LEAP Study, 2010) it was noted that fifty percent of patients who required amputation had experienced wound infection and/or significant tissue necrosis. Lifetime health care expenditures for patients with amputations were three times greater than those who experienced limb salvage; this does not capture the impact on positive impact on quality of life when limbs are salvaged. Hyperbaric oxygen therapy is an important adjunctive tool in the management of limb and life threatening wounds!

#### **REFERENCES**

Baynosa, RC, Zamboni, WA. (2012). The effect of oxygen on compromised grafts and flaps. Underseas and Hyperbaric Medicine Journal (39)4, 799-800.

Boerma I, Meijne NJ (1960). Life without blood. Journal of Cardiovascular Surgery(1): 133-146.

Hunt, TK, Zederfeldt b, Goldstick TK (1969). Oxygen and healing. American Journal of Surgery 188: 521-525. LEAP Study (2010). Journal of Bone and Joint Surgery 92, 2852.

Strauss, M (2012). Why hyperbaric oxygen therapy may be helpful in treating crush injuries and skeletal muscle-compartment syndrome. Underseas and Hyperbaric Medicine Journal (39)4, 799-800.

Tsuyi Y., Hirito T., Kitano, I. Tabaro, S., Sugiyama D. (2008). Importance of skin perfusion pressure in treatment of critical limb ischemia. WOUNDS 20(4): 95-100.

Before and after photos of diabetic foot wound healing from Hyperbaric Oxygen Therapy





http://deserthealthnews.com/hyberbaric-oxygen-therapy-an-effective-and-underused-modality-for-diabetic-wound-healing/



## NEW REHAB FACILITY OPENING FALL 2012



Page 6 The Healer November 2012

## **Arterial Wounds: Recognize and Save a Limb**

Teresa Matthews, FNP-C, CWCN, RN

Arterial insufficiency refers to impairment of arterial blood flow leading to tissue ischemia and potentially necrosis. Such impairment can occur acutely (eg, trauma, thrombosis) or chronically (eg, atherosclerosis). Both acute and chronic arterial insufficiency can lead to the formation of lower-extremity ulcers. Arterial insufficiency can occur at any level, from large arteries to arterioles and capillaries. Tissue ischemia that leads to leg ulcers tends to occur more in the setting of large vessel or mixed disease.

The most common cause of arterial ulcers is atherosclerosis. Risk factors for the development of atherosclerosis include age, smoking, diabetes mellitus, hypertension, dyslipidemia, family history, obesity, and sedentary lifestyle. It should be noted that arterial insufficiency might act in concert with other pathological mechanisms leading to tissue necrosis and ulceration. Diabetic foot ulcers, for example, may result from the combination of neuropathy, trauma, and arterial insufficiency.

Assessment and Documentation

The initial assessment of any ulcer begins with a thorough history and physical examination. Although most leg ulcers are caused by venous insufficiency, one must carefully assess for the presence of arterial insufficiency. Concomitant arterial disease can delay or prevent healing. Additionally, compression therapy, the cornerstone of treatment for venous insufficiency, can cause tissue necrosis and ulceration in patients with underlying arterial disease. This also can lead to a loss of limb.

Ischemic ulcers tend to have a "punched-



out" appearance, being small, round, and with smooth, well-demarcated borders. The wound base is typically pale and lacks granulation tissue. Wet or dry gangrene may be present. Arterial ulcers tend to occur over the distal part of the leg, especially the lateral malleoli, dorsum of the feet, and the toes. They can be shallow or deep and are frequently painful. In addition to these common features, the physical examination may reveal a decrease in peripheral pulses, lack of hair over the distal leg, and cyanosis, pallor, and/ or atrophy of the surrounding skin. Lifting the leg greater than 30 degrees can induce pallor in the ischemic limb. When dropped to a dependent position, the limb may become very red. Detailing this in your documentation will aid in the selection of interventions. For example, elevating would be contraindicated.

Vascular ulcers tend to have some characteristics similar to ischemic ulcers, including their location, size, and shallow depth. There are several typical differences, however. Vascular ulcers frequently have irregular shapes and borders. Additionally, the base of the wound tends to be necrotic with significant vascularity. Typically, there is significate exudate to control. The surrounding skin is usually hyperemic rather than pale. Vasculitis may also feature other cutaneous manifestations, including palpable purpura, petechiae, and persistent urticaria.

#### Management

Management of arterial ischemic ulcers classically includes pain control, use of occlusive dressings, and improvement of circulation. Treatment is also directed at the pathogenic causes of

arterial disease.

In our litigating society, documentation will preserve your hard-earned license and reputation. This is significant during the frequent scenario when the staff is in disagreement with the physician or surgeon. This is not the era of nurses in starched white uniforms scurrying about to follow the doctor's orders. While we are compelled as nurses to 'follow orders,' we are likewise educated professionals. Practicing with evidence based criteria is what may save you one day. If you know that evidence exists to not do a particular treatment, and a physician insists, what are your options?

- \* Your facility has a Medical Director. You want this person's respect.
- \* Document the assessed wound thoroughly.
- \* Print the evidenced based literature.
- \* Schedule a meeting with the Medical Director, the Director of Nursing, and the Nursing Home Administrator.
- \* Present yourself as a patient advocate, and professionally outline your findings. Keep it objective, factual, and researched.
- \* Keep a personal, detailed note about this meeting.

I do not believe in quiet nurses. Make some noise, and be heard.

#### Reference:

Hess CT. Clinical Guide to Skin and Wound Care. 6th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2008.



November 2012 Page 7 The Healer

## 2012 MAR Conference





Hosted by the Eastern Shore Affiliate Clarion Resort, Ocean City, MD

www.marwocn.org

#### Schedule of Events

riday, ober 26, 2012		Saturday October 27, 2012	
8:00 am	Registration with Continental Breakfast	7:30 am	Registration Opens
9:15 am	The Healing Power of Humor, "Dr Humor" Stuart Robertshaw	8:00-10:00 am	Exhibits Open with Continental Breakfa
10:15 am	HBO: It's Not Just About the Movies, Jim Wilcox CWCN ACHRN	10:00 – 11:00 a.m.	An Easy Approach to Patient and Famil Education, Michele L. Deck, RN, MEd, I LCCE, FACCE
-10:30	Break	11:00 - 12:00 noon	Infection Control: From Colinization a Beyond, Ramesh Vemulapalli, MD
)-11:30	No One Should Have to Live with Leakage, Elizabeth Kornfield, MD	12:00 – 1:15 p.m.	Lunch & Learn, Managing Patients Nutritional Risk in the In-patient Settir Michael J Kingan, RN, MSN, CWOCN
)-1:00 pm	Lunch and Membership Meeting (for all attendees)	1:15 – 1:30 p.m.	Break
1:15 pm	Break	1:30 – 2:30 p.m.	Updates in Rectal Cancer Surgery, Allei Chudzinski, MD
2:15 pm	Diabetic Limb Salvage-What is Special/What is New, John S. Steinberg, DPM FACFAS	2:30 – 3:30 p.m.	Nightmare to a Bad Dream- What You Need to Know About Fistulas, Sharon Osgood RN BSN CWON CCCN
3:15 pm	Incontinence Associated Dermatitis, Mikel Grey, PhD		
6:15 pm	Exhibits Open with Refreshments		
11:00 pm	Dinner and Entertainment (RSVP required)		

Page 8 The Healer November 2012

## Using An Ankle-Brachial Index to Determine Lower Extremity Arterial Disease- The First Step to Diagnosis

Wendy Surguy, CWOCN, RN

Have you ever wondered if the wound on your patient's leg was from poor circulation? If so, join the many healthcare professionals who ask that question every day. Lower extremity arterial disease (LEAD) affects approximately one third of individuals 66 years of age and older and has a high risk for nonhealing wounds, infection, and limb loss (Bonham, 2006). Early detection and treatment of LEAD (lower extremity arterial disease) or PAD (peripheral arterial disease) is the key to wound healing and limb salvage. The current estimates by the Peripheral Arterial Disease Coalition (2006) indicate that approximately 8 to 12 million adults in the United States have PAD (WOCN, 2012). Just for clarification, many times PAD and LEAD are terms used interchangeably by the medical profession, but don't be misled. PAD can affect the large vessels in any aspect of the peripheral arterial system, not just in the legs. LEAD is the term used to define arterial occlusive disease in the legs. This article will discuss how to perform an ABI and determine the level of LEAD. The patient's treatment plan and management options will be determined by the Ankle-Brachial Index results.

Now, let's review some anatomy. In the circulatory system, the arteries bring the blood from the heart down to the feet and the veins return the blood from the feet back to the heart. If there is insufficient blood flow down to the feet, the patient is said to have PAD or more specifically, LEAD. This disruption of the arterial blood flow can be caused by several factors including as high cholesterol, smoking, and diabetes. If left untested and untreated, this could lead to tissue ischemia, leg ulcers, infection, and amputation. The ABI test can also

be used for several other reasons including ruling out LEAD and determining adequate lower extremity blood flow prior to compression application or debridement.

There are several lower extremity circulatory tests which can be performed to detect LEAD and the ABI is the first step. The ankle brachial pressure index (ABI) is the ratio between ankle and brachial blood pressure and has been used for the screening of PAD for many years. The lower the ABI, the more luminal stenosis or occlusion, and the more severe in the lower extremities (Benyakorn, 2012). The purpose of the ABI is to support the diagnosis of vascular disease by providing an objective indicator of arterial perfusion to a lower extremity (WOCN 2012). If the results of the ABI determine that there is PAD/ LEAD evident in one or both legs, more extensive and invasive testing such as an arteriogram will be performed to determine the appropriate surgical or nonsurgical medical treatment.

Many patients have no symptoms of LEAD until it causes them to seek medical treatment due to increased pain in the leg(s) at rest. This symptom, called intermittent claudication, occurs later in the disease process after there is already circulation damage that may be irreversible and untreatable. For this reason, there are many people who have PAD and have not been seen by their physician for screening and prevention education. As said earlier, prevention and early management of LEAD is the key to circulatory health. This article will discuss how to correctly perform an ABI to determine the level of lower extremity arterial disease.

#### How to perform an ABI:

In order to correctly perform an ABI, you will need a hand held, 8-10 MHz Doppler with ultrasonic transmission gel, a stethoscope and a sphygmomanometer or BP machine. The cuff bladder width should be 40% of the limb circumference and long enough to cover 80% of the arm circumference (WOCN, 2012).

- Always explain the procedure to the patient prior to starting.
- Remove socks, shoes, and tight clothing to permit placement of pressure cuffs and access to pulse sites by Doppler.
- For 10-20 minutes, place the patient in a comfortable supine position. Ensure the room is warm because a cool room temperature will cause vasoconstriction of the arteries and affect the ABI results. Cover the patient appropriately to ensure privacy and warmth.

#### **Measure Brachial Pressure:**

- 1. Place the pressure cuffs with the bottom of the cuff approximately 2-3 cm above the bend on the arms (WOCN, 2012). Ensure there are no wrinkles in the cuffs prior to inflation.
- 2. Palpate the brachial pulse to determine location.
- 3. Apply transmission gel over the pulse site.
- 4. Place the tip of the Doppler probe at a 45° angle pointed towards the patient's head until an audible pulse signal is obtained.
  5. Inflate the pressure cuff 20-30 mmHg above the point where the pulse is no longer audible.
  6. Deflate the pressure cuff at a rate of 2-3 mmHg per second noting the manometer reading at which the first pulse signal is heard

**Continued on Page 9** 



Wendy Surguy BSN, RN, CWOCN

currently works at Bayhealth Medical Center as a CWOCN for Kent General Hospital and Milford Memorial Hospital. She obtained her associates degree in nursing (1997) at Pikes Peak Community College in Colorado Springs, CO. She is currently a graduate student in the Family Nurse Practitioner program at Wilmington University. Somewhere along the way, a gentleman and his family changed her nursing path and steered it towards wound healing. She graduated from Emory University WOCNEP in 2002 and has been practicing in the specialty ever since then. She is the current president of the Eastern Shore Wound, Ostomy, Continence Nursing Society and Legislative Board member elect to the National Wound, Ostomy, Continence Nurses Society. She is the co-chair of the first Delaware chapter of Save a Leg, Save a Life. Wendy is currently a Board Member and the professional coordinator for the Healthcare Educators of Delaware. She is extremely active in the local community and her professional organization.

November 2012 Page 9 The Healer

#### **Using ABI: Continued from Page 8**

and record that systolic value (WOCN, 2012).

- 7. Cleanse/remove gel from pulse site.
- 8. Repeat the procedure to measure the pressure on the other arm.
- 9. Record the readings to both the left and right arm pressures. Use the higher of the right or left arm's brachial systolic pressures to calculate the ABI for both legs.

#### **Measure Ankle Pressure:**

- 1. Place the cuff on the patient's lower leg with the bottom of the cuff approximately 2-3 cm above the malleolus. (ankle bone)
- 2. Prior to placing the cuff, ensure any wounds are covered.
- 3. Measure both the dorsalis pedis and posterior tibial pulses in each leg.
- 4. Locate the pulses by palpation or with the Doppler probe.
- 5. Apply transmission gel to the pulse site.
- 6. Place the tip of the Doppler probe at a 45° angle pointed towards the patient's knee until an audible pulse signal is obtained.
- 7. Inflate the pressure cuff 20-30 mmHg above the point where the pulse is no longer audible.
- 8. Deflate the cuff slowly at a rate of 2-3 mmHg per second, noting the manometer reading at which the first pulse signal is heard and record that systolic value.
- 9. Cleanse/remove gel from pulse site.
- 10. Repeat the procedure to measure pressures on the other ankle.
- 11. Record the readings to both the left and right ankle pressures. Use the higher of the ankle systolic pressures to calculate the ABI for both legs.

#### Calculate the ABI:

Ankle Systolic Pressure (150)

- = ABI Value (1.2)

Brachial Systolic Pressure (120)

Divide the highest ankle systolic pressure by the highest brachial systolic pressure. This will give you the ABI results. Compare the ABI values from each leg. Let's look at an example:

#### The Results / ABI Perfusion Status:

Here are the results of the ABI values and a clinical interpretation of the management needs for each value.

#### If the ABI is:

- > 1.3 = Elevated, incompressible vessels possibly due to diabetes or arteriosclerosis- if clinical symptoms are evident, further vascular testing is warranted.
- > 1.0 = Normal ABI
- < 0.9 = LEAD is present although unless patient is symptomatic, further testing is not necessary.
- $\leq$  0.8 = Borderline ischemia- Refer to vascular surgeon
- $\leq$  0.5 = Severe ischemia- Refer to vascular surgeon
- $\leq$  0.4 = Critical leg ischemia, limb threatenedrefer to vascular surgeon

## The patient should be referred to a vascular surgeon if:

- 1. The ABI is >0.8 and there are clinical symptoms of leg ischemia (dependent rubor, hairlessness, poor peripheral pulses, symptoms including intermittent claudication).
- 2. There is new onset LEAD
- 3. The patient has a wound which has failed to heal in 2-4 weeks or there is gangrene. (http://www.wocn.org).

Remember that the lower the ABI value, the higher the chance of amputation. If the results of the ABI show there is LEAD present, you must continue to educate the patient on the benefits of prevention of further occlusive disease and the results of worsening LEAD. Sometimes, the conversation of amputation is enough for the patient to understand the severity of the disease.

In the end, it is the patient's decision to either adapt a healthier lifestyle by managing their diabetes, smoking cessation, and lowering their cholesterol. The decision may be met with some resistance if the patient is not ready to adapt new lifestyle choices which can assist in prevention of LEAD and amputation. As a healthcare provider, I am responsible for my patients

understanding the ABI results and educating the patient on management choices. LEAD does not need to lead to amputation and can be treated if tested early.

#### References

Ankle Brachial Index: Quick Reference Guide for Clinicians. Retrieved 9/2/2012 from the National Wound, Ostomy, Continence Nurses Society website: http://www.wocn.org.

Benyakorn, T., Kuanprasert, S., Rerkasem, K. (2012). A correlation study between ankle brachial pressure index and the severity of coronary artery disease. International Journal of Lower Extremity Wounds, 11(2), 120-123.

Bonham, P.A. (2006). Get the LEAD out: noninvasive assessment for lower extremity arterial disease using ankle brachial index and toe brachial index measurements. Journal of Wound, Ostomy, Continence Nursing, 33(1), 30-41.

Bonham, P.A. (2012). WOC nurse consult: Misconceptions about the ankle brachial index. Journal of Wound, Ostomy, Continence Nursing, 31(1), 47-48.

#### Ankie-prachial index







Page 10 The Healer November 2012

## **CAREER CORNER**

To Advertise Your Open Positions or Desired Position please Contact William Matthews at 302-363-5839 for Rates

ADVANCED HEALING
is currently seeking a DE Licensed
Nurse Practictioner.
Wound Care Experience a plus.
Competative Salary.
Call 302-363-5839 for Information.





#### Cadia Rehabilitation Silverside

3322 Silverside Rd., Wilmington, DE 19810 (opening Nov. 2012)

Nursing Opportunities:

Unit Manager • Nurses (L/RN) • CNAs (all three shifts)

Also seeking: Maintenance Worker • Medical Records Clerk • Office Manager • Nursing Staff Scheduler • Social Worker

Resumes are being accepted at: <a href="mailto:Careers@cadiahealthcare.com">Careers@cadiahealthcare.com</a>

Apply online at <a href="https://www.cadiarehab.com">www.cadiarehab.com</a> (click on CAREERS)

November 2012 Page 11 The Healer

## A Venous Ulcer Case Study

Teresa Matthews, FNP-C, CWCN, RN

A 72-year-old woman with a complicated postoperative recovery following venous ulcer skin grafting was admitted to a skilled nursing facility for wound care. She presented with bilateral lower extremity wounds and 3 to 4+ pitting edema, toe to thigh. Her left lower extremity (LLE) had cellulitis, an infected donor site on the left anterior thigh measured 15 cm x 18 cm x 0.1 cm, and the wound was highly exudative and painful. The right lower extremity (RLE) had a partial-take skin graft site of the anterior and lateral calf regions; open ulcerations on medial RLE and lateral RLE measured 3 cm x 7 cm x 1.5 cm and 3 cm x 9 cm x 2 cm, respectively, and drainage was evident. The patient's comorbidities included insulin-dependent type 2 diabetes, neuropathy, morbid obesity, Stage I bilateral heel and posterior calf pressure ulcers, and fungal infection of the perineal region; the patient was bedbound. She required an 8-week rehabilitation stay including twice daily complex wound care; IV therapy; medications; nutritional therapy; bariatric-sized bed with a low-airloss, pressure-reduction surface; bariatric chair, commode, and lift; incontinence care and supplies; custom compression garments; laboratory tests; PT; OT; and psychiatric consult services. She is seen on our weekly wound rounds. Now what do we do! We have a few issues to tackle all at once. While it may seem overwhelming, let's break this down and prioritize and heal.

- 1. Her diabetes needs medical control. At the same time, we need to heal the wounds. The wounds and cellulitis will increase her blood sugar levels, and her high blood sugar levels will impede healing. We cannot do one without the other. The fact that she has a perineal fungal infection tells me her glucose levels are very high. Treating her cellulitis with antibiotics will increase the likelihood of a worsening fungal infection, and may require po Diflucan along with topical remedies.
- 2. Nutritionally, she is healing from surgery. The nutritionist consult can occur during the first day. A diabetic-controlled diet sufficient in protein and Vitamin C will likely be ordered. Probiotics will help with the antibiotic induced fungal issues.
- 3. Pressure ulcers are not going to help anything! Offloading the heels at all times is a good place to start. Neuropathy may intensify the pain of these areas, and would need to be treated as neuropathic pain with specific neuro pain relievers, vs. opioids. The posterior calf pressure ulcers should be closely assessed to insure correct diagnosis. Calves are not bony prominences, especially on an obese patient. With the venous and arterial etiologies, these would likely be rediagnosed during assessment and treated accordingly.
- 4. It is assumed that antibiotics have already been started. However, if they have

not, surgical wound cultures should be done first to determine any isolation needs. The wounds likely are infected with MRSA. The surgical wound dressing choice should be determined to reduce pain and reduce the need for a twice-weekly change. Draining, infected wounds respond well to Silver Alginate dressings.

- 5. Compression can help the edema. However, given her diabetes, the ulcers will need to be carefully assessed to rule out any arterial involvement. With a diabetes comorbidity, it is wise to have an ankle-brachial index done prior to compression. More information on ABIs can be found within this publication from Wendy Surguy, a Certified Wound, Ostomy, Continence nurse and author.
- 6. Venous wounds typically exudate and exhibit slough. A good treatment is Santyl, followed by a Calcium Alginate dressing. Once arterial sufficiency is confirmed, proceed with compression. For compression to be fully effective, a good physical therapy program is helpful in inducing the calf-pump muscle to work.

This is an expensive patient to have. Our current payment system is not proactive, and is reactionary. This puts a heavy burden on long term care facilities and the healthcare system as a whole.

#### Problem with current Medicare Payment System

Reimbursement under the Medicare Skilled Nursing. Facility PPS is intended to provide coverage of all services and goods that comprise the resident's daily skilled. This scenario includes skilled nursing, medications, equipment, medical-surgical supplies, rehabilitation, laboratory testing, and room and board. This patient's 8-week period of care resulted in closure of the wounds but the facility sustained a revenue loss of \$3,344.26. The calculations in the PPS rate for room and board did not accurately reflect the cost of the extensive manpower this individual required for daily care. Furthermore, her size necessitated procurement of bariatric equipment at significant un-reimbursed cost to the facility. Edema management was achieved with custom compression garments that were not reimbursed. She was on a Med A stay, eliminating her Medicare Part B coverage for wound dressings. Furthermore, without ongoing, lifelong compression therapy, ulcers reoccur. Neither Medicare nor Medicaid currently provides for coverage of preventative maintenance compression garments to avoid costly ulcerations or to prevent recurrence. In addition, individuals with complex health issues and abnormal posturing require custom seating systems that support quality of life and health maintenance, yet no reimbursement allowance is extended to those confined to long-term care settings. If Medicaid denies

this appeal for specialty equipment, resources

are nonexistent to cover such extensive cost, increasing the risk for complications, the need for medications, diagnostic services, and further hospitalization. Does this make sense? Venous ulcer patients with significant comorbidities require numerous services, products, and equipment in the skilled nursing setting. Very large gaps exist between evidence-based care needs and reimbursement.

Our current healthcare system is beginning to recognize the need for preventative care through home visits from Clinical Nurse Specialists. This is a bright future for anyone contemplating continuing their education. This is an area for entrepreneurship and private practice. Through education, we can lead our healthcare system from reactionary, to proactive prevention. Nurses are no longer followers. We are leaders. If you enjoy educating, working for yourself, and making a huge difference in the future of healthcare, seize this opportunity, and carve out your career to shine as brightly as your ambition. There are no limits in nursing. Bust through that glass ceiling, and create the career that brings you joy. Patients, like this one, are waiting for you.

#### References

1. McGuckin M, Waterman R, Brooks J, et al. Validation

of venous leg ulcer guidelines in the United States and United Kingdom. Am J Surg. 2002;183:132–137.

### **Common Blood Tests**

LJBMZKUOVVDSELCLLQO WVCAANPOSSAHFNZULFA J F N U B G R R O O E S X T M B E U S USFCLZNHOMDZPTLQCNU J F B T F T P E O T S I H X U A D E L QUWSXKUGSMECUWTXOLK N P F A L U L R D I G I M M B M O E L TOIASOELEIURNINULCR EKURBTPNEKCMSAWIBTL OUCICPGNICWAPDTCERI KBNOHLFNONDWCTELTOP CAYQUCVRQHIODIXAI CZQCIRIOLOETOMRCHYD PHOSPHOROUSIALAUWTP BSIKCFGDWISZQEBZPEA EKCFERRITINUCURDRSN NNIMATIVPWYXNSXCEZE SQUNDGPOTASSIUMSYRL RKQYSYMTSHLLZFHEDDV

ALK PHOS
ALT
AST
BUN
CALCIUM
CBC
CREATININE
CULTURE

**ELECTROLYTES** 

FERRITIN
GLUCOSE
HCG
HEMOGLOBIN A C
INR
LIPID PANEL
MAGNESIUM
PHOSPHOROUS
POTASSIUM

PROTEIN
PSA
RED BLOOD CELL
SODIUM
TSH
URIC ACID
VITAMIN
WHITE BLOOD CELL
ZINC

Puzzle Courtesy of Norma Waltman

#### 2012 MAR Conference





Hosted by the Eastern Shore Affiliate.

October 26 - 27, 2012

Clarion Resort, Ocean City, MD

www.marwocn.org

November 2012 Page 13 The Healer

### This and That

#### Time Heals All Wounds and Time Wounds All Heels

submitted by: Valerie Graham, BSN, RN.

### Old Age is a Gift - I Have Decided



I am now, probably for the first time in my life, the person I have always wanted to be. Oh, not my body! I sometime despair over my body - the wrinkles, the baggy eyes, and the sagging butt. And often I am taken aback by that old person that lives in my mirror, but I don't agonize over those things for long.

I would never trade my amazing friends, my wonderful life, my loving family for less gray hair or a flatter belly. As I've aged, I've become more kind to myself, and less critical of myself. I've become my own friend. I don't chide myself for eating that extra cookie, or for not making my bed, or for buying that silly cement gecko that I didn't need, but looks so avant-garde on my patio. I am entitled to overeat, to be messy, to be extravagant. I have seen too many dear friends leave this world too soon; before they understood the great freedom that comes with aging.

Whose business is it if I choose to read or play on the computer until 4 am, and sleep until noon? I will dance with myself to those wonderful tunes of the 60's, and if I, at the same time, wish to weep over a lost love.. I will I will walk the beach in a swim suit that is stretched over a bulging body, and will dive into the waves with abandon if I choose to, despite the pitying glances from the bikini set. They, too, will get old!

I know I am sometimes forgetful. But there again, some of life is just as well forgotten, and I eventually remember the important things.

Sure, over the years my heart has been broken. How can your heart not break when you lose a loved one, or when a child suffers, or even when a beloved pet gets hit by a car? But broken hearts are what give us strength and understanding and compassion. A heart never broken is pristine and sterile and will never know the joy of being imperfect.



I am so blessed to have lived long enough to have my hair turn gray, and to have my youthful laughs be forever etched into deep grooves on my face. So many have never laughed, and so many have died before their hair could turn silver. I can say 'no', and mean it. I can say 'yes', and mean it

As you get older, it is easier to be positive. You care less about what other people think. I don't question myself anymore. I've even earned the right to be wrong

So, to answer your question, I like being old. It has set me free. I like the person I have become. I am not going to live forever, but while I am still here, I will not waste time lamenting what could have been, or worrying about what will be. And I shall eat dessert every single day

Today, I wish you a day of ordinary miracles.

#### Venous vs. Arterial An Educational Tool

Assessment criteria	Venous disease	Arterial disease	
	Previous history of DVT		
	Varicose veins	Diabetes	
	Reduced mobility		
	Traumatic injury to the lower leg Obesity Pregnancy	Hypertension	
Presenting history, physical and social risk factors		Smoking Prior history of vascular disease	
SOCIAL LISK LACTOLS			
	Non-healing ulceration	Obesity	
	Recurrent phlebitis	Inability to elevate limb	
	Previous vein surgery		
		Lateral malleolus and tibial area	
Position of ulceration	Gaiter area of the leg	are common sites as well as	
1 osition of diceration	Common site is medial aspect	toes and feet over pressure	
		points	
	Throbbing, aching, heavy feeling	Intermittent claudication	
Pain	Improves with elevation and rest	Can be worse at night and at rest	
		Improves with dependency	
		Punched out, occasionally deep	
	Shallow with flat margins	Irregular in shape	
Ulcer characteristics	Slough at base of wound	Unhealthy appearance of wound	
	Moderate to heavy exudate	Low exudate	
		Frequent infection with exudate	
	Hemosiderin staining		
	Thickening and fibrosis	Thin, shiny, dry skin	
	Dilated veins at the ankle	Reduced or no hair on lower leg	
Condition of the lower log	Crusty, dry, hyperkeratotic skin	Skin feels cooler to touch	
Condition of the lower leg	Eczematous, itchy skin	Pallor on leg elevation	
	Pedal pulses present	Absence or weak pedal pulses	
	Normal capillary refill	Delayed capillary refill Development of gangrene	
	Limb edema is common		



(http://meded.ucsd.edu/clinicalmed/extremities\_venous\_ulcer6.jpg)

#### **Pictures of Venous Wounds**



(http://www.worldwidewounds.com/2002/april/ Vowden/images/WBP-Figure-6a.jpg)



(http://www.healthhype.com/wp-content/uploads/ stasis\_ulcer.jpg)

#### **Pictures of Arterial Wounds**



(http://img.medscape.com/fullsize/migrated/579/994/wounds579994.fig3b.gif)



(http://www.bing.com/images/search?q=pictures+of+arterial+wounds&view=detail&id=B01BA96CADB19B8 CDCFE7D70C944515664DA81E1)



(http://www.urgo.co.uk/uploaded-files/img/images/ venous-ulcers-12.jpg)

November 2012 Page 15 The Healer

## TAKING CARE OF YOURSELF UNLIMITED TIME OFF

Teresa Matthews, FNP-C, CWCN, RN

To have exceptional wound care requires exceptional employees. This is why I have decided to devote one article per publication entirely to the holistic health of healthcare workers. On weekly wound rounds, I see firsthand the fatigue, mental exhaustion, and physical toll this job takes. Employment usually structures time off for physical sick time, and generally one or two weeks for vacation time. Obviously, this is not enough for this profession.

The idea of unlimited time off seems radical and liberal. These are two very good reasons for it to work. August 2010 began with a story from NPR, National Public Radio. Traditionally conservative, the radio station began receiving rave reviews after running a story on companies who offer unlimited time off. The companies, including Netflix, found that productivity soared, deadlines were met, and people were taking less sick time, knowing they could have unlimited time off. This story went on to discuss how one father was able to spend several weeks at home with the birth of his new baby, and how workers who had not had a vacation in years were now able to enjoy lengthy time off. Companies who have had to cut other perks during the recession can effectively recruit with this vacation incentive. No one can dispute the value of days off. Companies are finding the workers more loyal and engaged. (http://www.npr.org/templates/ story/story.php?storyId=129137542).

This is a trust-based system, which actually treats people as though they can manage their lives. Imagine that! Evernote, based in Redwood City, Calif., is one of a growing number of companies to offer workers unlimited paid vacation in the hopes of lowering employee stress and cutting down on disruptive turnover. "Some companies are realizing they have to look for other benefits for their employees because the limited, paid vacation doesn't look like a benefit anymore. It feels like more control," says Jody Thompson, co-founder of workforce consultant CultureRx.

Often, employees greet the newfound freedom with suspicion. At Evernote, which did away with vacation limits in 2011, "the first thing we noticed when we did it was that some people started taking less vacation," says chief executive Phil Libin. With no prescribed amount of time off, the company's heads-down engineers assumed less leave would make them look better. So as an added incentive, Evernote began writing \$1,000 checks for anyone taking a weeklong trip—provided they produced evidence of an airline ticket and reported back to colleagues on what they did. "Our employees are better after they have traveled," Libin says. "They are more productive; they are more useful to the company."

Employees are better after a vacation! Expecting our healthcare workers to provide holistic care when they are not holistically caring for themselves is unrealistic. I find this particularly relevant in long term care. Seeing the residents confined to a SNF brings a sense of foreboding for the days to come. I have always said how I love life, but I do not love how it ends. The only buffer I see for this unavoidable suffering is to live life as fully as possible while we can.

There may always be those who abuse this privilege. However, companies who are progressive enough to offer such an incentive will be quick to weed out the workers who take advantage of the benefit without adequate return on their productivity. Recruitment of the "best of the best" will become much easier with unlimited time off.

Hourly workers would have to schedule this, and still be responsible for their coverage, if needed. However, successful management professionals have an innate personality with will have them checking their blackberries while hiking, finishing projects ahead of schedule preemptively before an upcoming trip, and working hard to catch up upon their return. Employers will instantly see the benefit when there has been an increase in productivity. Employees work to provide results in an efficient manner and are

able to enjoy their well-deserved vacations when they have completed their necessary work. Employees have an incentive to work harder while at work. If employees know they need to complete a project today, but are not restricted to that 8-hour time frame, and will be able to leave once it is completed, the project may be completed earlier. Employers who have an unlimited time off policy have a more relaxed, yet more productive workforce.

Nowhere is this needed more than in healthcare. With the nursing shortage past it's critical reign, implementations can begin to assure adequate staffing with the responsibility falling to the nurse for adequate coverage. A teamwork approach can follow; i.e. "cover my vacation and I'll cover yours." As long as the patient's needs are being fully met, there is absolutely no reason whatsoever not to implement an unlimited time off policy. A patient would benefit from a mentally rested, physically recharged professional, vs. someone who is longing for more time with her children. The Directors and Assistant Directors of Nursing can begin interchanging their responsibilities so insure each one takes adequate time off. The staff will benefit from relaxed leadership that promotes positive team building skills.

I hear the skeptics! "This would never work!" "How in the world do you propose this?" "There aren't enough workers!" I have a simple answer. What you are doing is not working. Take that negative, skeptical energy and put it towards this idea. Give your professionals unlimited time off. This is a win/win for everyone, especially the patient. This can work in health care. This is needed in health care. We must teach our employees to care for themselves before they can effectively care for anyone else.

From this day forth, my company now has an unlimited time off work policy. I know this will come back to me positively and productively.

Now, go enjoy life.





Page 16 The Healer November 2012

## Long Term Care

## Are You Concerned About:

- Risk
- Profitability
- Patient Care
- Pain Control
- Infection Control

## **Advanced Healing**

is your SOLUTION!

Teresa Matthews, FNP-C, MSN, CWCN, RN 107 Russell Drive Milford, DE 19963 Phone: 302-363-5839 Fax: 302-424-7755 www.advanced-healing.net

# Specializing in: Pain Management and Wound Care.



Advanced Healing takes the patient's pain very seriously. All wound care and dressing changes will coincide with a comprehensive pain control policy.

Advanced Healing can provide education to your staff on wound topics such as documentation, F314, assessment and measuring, and wound identification. These sessions are personally tailored to the specific educational needs of the facility and are complementary to the weekly services provided.

Avanced Healing

Wigher Level of Health

Advanced Healing, makes regular, scheduled weekly visits to each participating nursing home for treating new and established wound patients. The weekly visit is meant to supplement, not replace, the daily wound care provided by the nursing home.

Following each visit, Advanced Healing will provide the nursing home with written follow-up care recommendations for each wound for the coming week. Whenever possible, these recommendations will take into consideration the dressings and supplies available in the nursing home's formulary.



documentation that complies with Medicare and state regulations, Advanced Healing will provide a complete weekly evaluation. This includes suggested treatment plans, Medicare approved product protocols, pain management, and bedside debridement, if indicated. This will save costly transportation fees to local wound care centers. Collaboration with physicians, dieticians, physical therapists, and other holistic practices will complete the treatment plan. By billing Medicare and insurances directly, there is no cost to your facility.