

# SYNERGY

THE VOICE OF THE AMERICAN PROFESSIONAL WOUND CARE ASSOCIATION



WINTER 2006

## CONFERENCE SNEAK PEEK

### 2006 National Conference Is Over the Top with 28 Hours of Available Education



Wyndham Philadelphia at Franklin Plaza.

by Larry Schuster, DPM, FAPWCA, FACFS

The fifth annual conference will kick off Friday, April 7th at 8:00 a.m. at the Wyndham Philadelphia at Franklin Plaza. Ira Herman, Ph.D., FAPWCA, will present the initial lecture. Dr. Herman brings his vast knowledge on the cellular aspects of wound healing.



Ira Herman, Ph.D., FAPWCA

The lecture will be complimented by Ross/Abbott's sponsorship of a full breakfast buffet. This opening event affords a great opportunity for participants to mix with their colleagues, learn new facets about the healing of wounds and start the day with a hearty meal.

Michael Edmonds, MD, from the UK, will deliver the keynote address as the morning session continues. Dr. Edmonds' keynote lecture will feature a comprehensive, world wide understanding of the diabetic foot. Dr. Edmonds is one of the most prolific



The city of Brotherly Love, Philadelphia, and its many attractions.

authors on the diabetic foot and travels around the world addressing this topic.

Other leaders in the field of wound care, Drs. Robert Frykberg and Jeffrey Niezgoda will share their expertise with cutting-edge knowledge on the diabetic foot, amputation prevention and methods of treating infection. Peter Sheehan, MD, another icon in diabetes and

related complications will share the podium with Dr. Edmonds to discuss the results of American and European clinical trials for bi-layered skin substitute. Both Drs. Sheehan and Edmonds were involved in the clinical trials so their remarks about

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## FEATURED ARTICLE

### Silver Resistance, Actual Level of Silver Ions in a Wound and Negative Wound Healing Outcomes: A Brief Review of Related Subjects

by Debashish Chakravarthy, Ph.D., FAPWCA

The use of silver containing wound dressings as a means to control bioburden within a wound is an increasingly accepted clinical concept. It is now generally known that the presence of controlled quantities of silver ions in a wound dressing matrix generates an environment that is hostile to pathogens, which is in turn is helpful to wound healing.

A topic of active discussion is what the *right* levels of silver ought to be in the ideal silver containing wound dressing. Two recent reviews on the subject have suggested that a high level of silver ion, such as the level that arises from the use of nanocrystalline silver products, is optimal (1. Infection and the chronic wound, Warriner R, Burrell R. *Advances in Skin &*

*Wound Care*, 18, Suppl. 1, (2005), 1-12. 2. A discussion of silver as an antimicrobial agent: alleviating the confusion. Brett D. *OstomyWound Management*, 52, Issue 1, (2006), 34-41). These opinions come from the point of view that a high degree of silver ion availability in the wound environment leads to super-rapid pathogen kill rates, a phenomenon that discourages the development of mutant pathogenic strains.

There exists the possibility that high levels of silver/silver ions may interfere with the process of healing. *In vitro* data exists to show that high levels of silver ions is excessively cytotoxic, and potentially harmful to proliferating cells in a wound bed (*In vitro* cytotoxicity of silver: implication for clinical wound care. Poon V, Burd A. *Burns* 30, (2004), 140-147). A peer reviewed study also discusses the possibility that dressings consisting of

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Colleagues and friends, as wound care professionals we must prepare ourselves for two major time bombs facing the health care delivery system. Our role as healers will become many times more demanding and important in the next 20 years. Results of a joint report by the Yale School of Public Health and Medicine and the Institute for Alternative Futures was announced November 9, 2005. The report forecasts the dramatic consequences of the diabetes epidemic. If the barriers to diabetes prevention and treatment are not seriously addressed and care is not improved in the United States, projections for 2025 indicate staggering number of deaths associated with diabetes as well as the cases of blindness and amputations. Issuing an alarm, the World Health Organization (WHO) and the International Diabetes Foundation report the number of worldwide sufferers would more than double to 366 million by 2030, from some 171 million at present. Although diabetes is often thought to be a rich-country disease, it is in poorer countries that diabetes is growing fastest, with cases seen rising 150 percent over the next 25 years. In India, for example, the number would leap from 32 million to 80 million.

The baby boomers entering retirement represent the other time bomb. The first

of the boomers, born between 1946 and 1964, will turn 65 in 2011. By 2030, the 65-plus segment will account for approximately 20% of the U.S. population, twice the 65-plus share in 2000.

Finn Gottrup, MD, DMSci, a Professor of Surgery at University of Southern Denmark, supports our concept of interdisciplinary cooperation in his article published in the *American Journal of Surgery* 2004 May;187(5A):38S-43S. His findings support our approach that the optimal way to improve prophylaxis and treatment of patients with problem wounds is to create an interdependent multidisciplinary wound-healing center. This center focuses on all types of problem wounds and has an outpatient clinic, as well as an inpatient ward. He states an integrated wound-healing department concept should be a standard in wound healing.

Our organization has realized the synergy created by multidisciplinary cooperation. The APWCA recognizes this crisis. In association with world wound care leaders and our emphasis on multidisciplinary cooperation, we will continue to be leaders in our field. Our 2006 National Conference will feature eminent leaders in many disciplines and from other countries. Join us in our mission to address the future.

## Pneumatic Medicine and Rapid Wound Healing

by Laura F. Jacobs, MD, PhD, FAPWCA

As wound care specialists, each of us struggles to heal patient wounds that stubbornly persist for months, if not years. Often, we see little real improvement, and at times the wounds actually worsen, despite dedicated healthcare practitioners and time consuming and expensive treatments.

Today's modern wound care centers focus primarily on the importance of maximizing the wound microenvironment in order to promote healing. Dirty wounds are cleaned, necrotic tissue is debrided, infections are hit with antimicrobials, weight bearing surfaces and bony prominences are off-loaded and advanced wound dressings, topicals and growth factors are liberally employed.

Almost all patients with non-healing wounds, however, have some clinically significant degree of underlying circulatory compromise caused by arterial, venous, or lymphatic insufficiency. Often, there is pathology in two or even all three of these vascular systems. Even those with "normal" vascular studies may have poor microcirculation because of such co-morbidities as diabetes, obesity and atherosclerotic disease.

Additionally, there may be very high tissue pressure in the wound area due to indolent cellulitis, lymphatic engorgement, induration, fibrosis or edema. The excessive tissue pressure further inhibits adequate arterial, venous and lymphatic microcirculation, resulting in chronic, non-healing lesions even after achieving a favorable microenvironment.

Recently, Pneumatic Medicine was developed to address peripheral microcirculatory compromise. Simply defined, Pneumatic Medicine is the use of external, dynamic pneumatic compression to treat a wide array of peripheral vascular diseases including venous insufficiency, lymphedema and chronic wounds. It is considered a welcome adjunct to other treatment options, including surgery, gradient compression stockings and medications.

Pneumatic Medicine sharply highlights the vast physiological difference between static pressure and dynamic compression to improve peripheral microcirculation. Normal physiology uses several dynamic compression mechanisms, such as the muscle pump of the legs and peristalsis, to aid circulation and fluid flow. Accordingly, wound healing treatments should move away from non-physiological static pressure techniques to more dynamic compression strategies that promote and enhance microcirculation.

The core component of Pneumatic Medicine is the NormaTec PCD, a new, state-of-the-art pneumatic compression device (Figure 1). Pneumatic compression devices, formerly called "lymphedema pumps," have been available for over 40 years for treating lymphedema and venous stasis ulceration.

The NormaTec PCD's patented Peristaltic Pulse dynamic compression waveform is designed to simulate normal physiology. The waveform's pulse-gradient hold-release sequential action incorporates the dynamic compression of both the muscle pump and peristalsis to effectively promote microcirculation and aid wound healing. A typical wound care patient uses

the device approximately one hour per day in a home treatment program until the wound is completely healed. To prevent the reoccurrence of wounds, it is usually recommended that the patient continue to use the device for one hour every two to three days. The NormaTec PCD is FDA cleared for the treatment of venous stasis ulceration and chronic wounds, venous insufficiency, lymphedema and other edematous conditions and the prevention of deep venous thrombosis.

It is equally crucial to make the device user friendly, simple to prescribe and, most important of all, covered by Medicare and other health insurers. NormaTec has done exactly that, and also provides training in clinical protocols so that wound care specialists can easily incorporate Pneumatic Medicine into their practice. Furthermore, a built-in monitor on the device discreetly tracks patient compliance and newly designed toe caps eliminate any patient discomfort.

One such wound care center is the Southwest Regional Wound Care Center in Lubbock, Texas. Founded and directed by Randall Wolcott, MD, FAPWCA, a Board certified specialist in both Physical Medicine and Rehabilitation and Family Practice, the Center and its staff of experienced wound care specialists (physician assistants, nurses and aides) has been using Pneumatic Medicine in their treatment protocols since February 2005. After on-site training provided by NormaTec, the Center's medical staff could quickly assess appropriate candidates for Pneumatic Medicine and prescribe and use the NormaTec PCD, all with minimal effort. Their patients use the PCD at home as part of the Center's overall treatment regimen.



Figure 1: The NormaTec PCD



Figure 2



Figure 3

Soon after beginning to prescribe the PCD, the Center reported dramatic clinical outcomes and two of their case studies are presented below. Additionally, Dr. Wolcott will be speaking at the **APWCA National Wound Care Conference** as part of the April 2006 Annual Scientific Address, where he'll further detail his experiences with Pneumatic Medicine and the NormaTec PCD. These case studies and clinical photos and are courtesy of the Southwest Regional Wound Care Center.

**Case 1:** Mr. X is an 80-year-old male with bilateral lower extremity venous insufficiency and lymphedema. His past medical history included osteoarthritis, hypertension, hypercholesterolemia, hypothyroidism, and Parkinson's disease. He had two prior episodes of leg cellulitis, one of which required IV antibiotics, and he originally presented to the Center with a chronic, non-healing wound on the anterior surface of his lower leg (Figure 2).

Pneumatic Medicine treatment was prescribed for Mr. X along with the other wound care treatments typically used at the Center, and after using the PCD at home for approximately one hour per day for four weeks, the wound had completely healed (Figure 3).

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# Alliance Organizations Stress Concerns of Competitive Bidding on Medicare Patients at CMS Meeting

By Marcia Nussgart, R.Ph., AAPWCA



Representatives from the Alliance of Wound Care Stakeholders organizations, Dr. George Taler, Sharon Baranoski, DAPWCA and Thomas Jeffers, educated Centers for Medicare and Medicaid Services (CMS) officials on how competitive bidding of support surfaces, if implemented, would impact physicians, clinicians, manufacturers, providers and most importantly, Medicare beneficiaries.

These individuals were selected by CMS staff to serve on a home medical equipment (HME) panel and speak at the September 26-27, 2005 Program Advisory and Oversight Committee (PAOC) meeting on competitive bidding. They were nominated by Alliance participating organizations, National Pressure Ulcer Advisory Panel, Wound Ostomy Continence Nurses Society, Coalition of Wound Care Manufacturers and the National Association for Support of Long Term Care. The PAOC is a group assembled to advise CMS on how to craft a competitive bidding program for durable medical equipment prosthetic and orthotic supplies (DMEPOS).

The HME Panel was one of 6 panels convened by the PAOC which also included rehab/assistive technology, respiratory, diabetic supplies, orthotics and prosthetics, and beneficiary organizations. In preparation for implementation of competitive bidding in 2007, CMS staff was interested in obtaining input on the impact of competitive bidding on these particular product sectors. Currently, the products that will be competitively bid have not been selected; however, stakeholders are awaiting the publishing of a proposed rule which will give details on criteria for site selection, item selection, bid evaluation process and structure for implementation.

Even though CMS designated the panel as HME, the speakers devoted most of their speech to addressing support surfaces since it involves a complex mix of medical devices, service and care that makes it inappropriate for competitive bidding. By including support surfaces in a competitive bidding program, reimbursement could be decreased to a level that forces providers to reduce services. That, in turn, could reduce patient compliance and outcomes, and result in more costly emergency room and hospital visits.

The HME Panel emphasized that to continue to provide Medicare beneficiaries with the continued quality and support, care must be taken to ensure that pricing is not the only consideration in the bid process. Instead CMS must consider the following factors:

- Clinical complexity of patients who need the products
- Ensuring patient access to appropriate and quality HME
- Access to quality providers who provide the necessary services
- Streamlining documentation
- Ensuring that the innovation process for new technology is not stifled
- Expanding HCPCS coding to represent the extremely wide array of products of varying quality, technology, function and efficacy

Dr. George Taler, Director of Long Term Care at Washington Hospital Center in Washington DC, spoke of the home care physician's concerns with competitive bidding. He described the complexity of the wound care patient and the physician's need to prescribe a wide range of support surfaces due to the diverse patient population. Dr. Taler addressed his expectations for equipment and supplies in that they meet both the clinical and functional needs of the patient. His concerns with competitive bidding also included the need to have access to niche providers who provide the necessary services for his patients. He also detailed his concerns regarding documentation which include the careplan oversight and certificates of medical necessity. He warned that competitive bidding might place wound care patients at risk and that the price of failure of treating them appropriately was high—in increased use of emergency departments, avoidable hospitalizations, nursing home placements and misspent personal and societal resources.

Sharon Baranoski, MSN, RN, CWOCN, FAAN, DAPWCA, Administrator, Home Health at Silver Cross Hospital in Joliet, Illinois stressed the clinician's role by establishing a comprehensive plan of care for patients in the home care setting and the need for appropriate home medical equipment. She emphasized two clinicians' concerns with competitive bidding:

- Limit of patient access to appropriate home medical equipment for their care needs
- Limit of patient access to quality providers who provide the necessary services

She posed the following questions to the PAOC:

- "Will there be enough providers both in rural and metropolitan areas to provide the service that our patients need?"
- "Will the only providers that win the bids be ones who drop off equipment and haven't been trained in proper set up, patient care instructions, follow-up, maintenance needs and safety?"
- "Will the only providers who win the bids be ones who deliver equipment that they have in stock versus what is ordered?"

In addition to the Panelists' presentations, there was discussion of the newly released draft of the draft of quality standards for suppliers. Eventually, all DMEPOS suppliers who want to participate in Medicare will have to meet the quality standards—including business and product-specific requirement—which will be applied by CMS approved accrediting bodies as mandated under the Medicare Modernization Act.

More information about the meeting, the presentations, and the quality standards can be found at:

<http://www.cms.hhs.gov/suppliers/dmepos/compbid/paoc.asp>.

## Pneumatic Medicine and Rapid Wound Healing *(Continued from page 4)*



Figure 4

**Case 2:** Mrs. Y is a 75-year-old female with bilateral lower extremity venous insufficiency and multiple deep non-healing wounds on the dorsum of her left foot (Figure 4). Her past medical history was significant for a cardiac arrhythmia, congestive heart failure, diabetes, and diabetic peripheral neuropathy. She had several prior episodes of cellulitis, at least one of which required hospitalization for IV antibiotics.



Figure 5

Mrs. Y was also treated with Pneumatic Medicine and after three weeks of daily home treatment, the wound was completely healed (Figure 5). She continued to use the device in a maintenance program and after three months the wounds remained completely healed (Figure 6).



Figure 6

(1) Jacobs, L., Magnuson, R., and Alexander, M. **Lymphedema Treatment: Precision of Pneumatic Compression Devices.** *Arch PM&R* 72(10): 781, 1991.



APWCA has added a satellite

## DINNER SYMPOSIUM

to the Annual Conference agenda

Sponsored by HEALTHPOINT Tissue Management

**Thursday, April 6, 2006---5:45 to 7:00 p.m.**

Wyndham Franklin Plaza Hotel---APWCA Conference host hotel

Registration Required and Pre-registration Preferred  
Open to all Pre-Conference and General Sessions Registrants  
Seating is limited.

Please contact APWCA headquarters for registration.