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Wound Care CANADA

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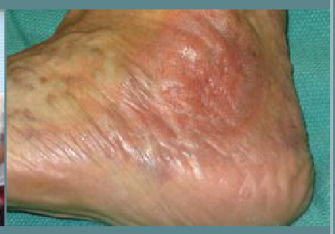

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1 - GOTTRUP et al., "Less pain with Biatain-Ibu Initial findings from a randomized, controlled, double-blind clinical investigation on painful venous leg ulcers", International Wound Journal 2007, vol. 4 [suppl.1] , p. 24-34
2 - Jorgensen et al., "Pain and quality of life for patients with venous leg ulcers Proof of concept of the efficacy of Biatain-Ibu, a new pain reducing wound dressing Wound Repair and Regenerations, 2006 vol. 14no.3 p233-239
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Knowledge is Only Part of the Answer

Sue Rosenthal

Health-care providers need more than just knowledge about wound care to make the changes in practice necessary to provide the best care possible. In the fall of 2008, at the Theme Meetings held in Victoria and Halifax, the CAWC presented a concept to ensure that best practice actually gets implemented—and is sustainable. The concept is based on the domains that make up health care: nicknamed "PIE," they are Practice, Institution and Education. Since then we have added an "S" domain, for System. The PIES concept promotes the identification of the domain or domains where gaps exist that result in any care that does not meet best practice standards. In almost every case, change to improve care is only possible when more than one domain is involved. Clinicians who try to implement change on their own, based on their own new knowledge, are keenly aware that it takes more than just new information to successfully implement change.

All of the main articles in this issue clearly demonstrate the multi-domain PIES approach, even though the authors may not have been aware of it. For example, Kimberly Stevenson's update on the Pressure Ulcer Awareness and Prevention Program from the CAWC illustrates how a small expenditure can result in big cost savings and reduced patient suffering while reducing clinician workload—because the program is based on the concept of PIES. When you read the other articles your challenge as a discerning reader will be to see if you can identify the different domains addressed by each author. Although the terminology may vary slightly, you are sure to recognize clinical **P**ractice, **I**nstitutional support, **E**ducational initiatives, and **S**ystemic issues in the articles and to develop a sense for how these interact to support or undermine best practice.

La connaissance est seulement une partie de la réponse

Les cliniciens auront besoin de plus que des connaissances en soins de santé afin d'effectuer les changements de pratique nécessaires pour offrir le meilleur soin possible. À l'automne 2008, lors des réunions thématiques tenues à Victoria et Halifax, l'ACSP a présenté un concept pour s'assurer que les pratiques d'excellence soient mises en place et qu'il soit possible de les maintenir. Le concept est basé sur les disciplines qui forment les soins de santé. Il est surnommé « PIE » pour Pratique, Institution et Éducation. Depuis, nous avons ajouté une discipline « S » pour Système. Le concept PIES fait la promotion de l'identification des disciplines où des manques existent et qui résultent en soins qui ne rencontrent pas les normes de pratiques d'excellence. Dans presque tous les cas, le changement en vue d'améliorer les soins est seulement possible lorsque plus d'une discipline participe. Les cliniciens qui tentent, seuls, d'effectuer la mise en place du changement selon leurs nouvelles connaissances sont conscients qu'il faut plus que de nouvelles informations pour implanter un changement avec succès.

Tous les articles principaux de ce numéro illustrent clairement l'approche multidisciplinaire du PIES, même si l'auteur l'a fait inconsciemment. Par exemple, la mise à jour de Kimberly Stevenson sur le programme de sensibilisation et de prévention des ulcères de pression de l'ACSP démontre comment un petit budget peut faire épargner une large somme et diminuer la douleur ressentie par un patient, et ce, tout en réduisant la charge de travail du clinicien. Pourquoi ? Parce que le programme est basé sur le concept PIES. Lorsque vous lirez les autres articles, votre défi en tant que lecteur sera d'identifier les différentes disciplines abordées par les auteurs. Bien que la terminologie puisse varier légèrement, vous devriez être en mesure de reconnaître la **P**ratique clinique, le soutien **I**nstitutionnel, les initiatives **É**ducationnelles et les défis liés au **S**ystème dans chaque article. Vous verrez comment chaque discipline interagie pour soutenir ou miner les pratiques d'excellence.

Sue Rosenthal, BA, MA, specializes in health and wellness communications and has been associated with the CAWC since 2000.

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Canadian Association of Wound Care / Association canadienne du soin des plaies

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The Canadian Association of Wound Care is a non-profit organization of health-care professionals, industry participants, patients and caregivers dedicated to the advancement of wound care in Canada.

The CAWC was formed in 1995, and its official meeting is the CAWC annual conference held in Canada each year. The association's efforts are focused on five key areas: public policy, clinical practice, education, research and connecting with the international wound-care community. The CAWC works to significantly improve patient care, clinical outcomes and the professional satisfaction of wound-care clinicians.

L'Association canadienne du soin des plaies est un organisme sans but lucratif regroupant des professionnels de la santé, des gens de l'industrie, des patients et des membres du personnel soignant fortement intéressés à l'avancement des connaissances pour le soin des plaies au Canada.

Fondée en 1995, l'ACSP organise, chaque année, au Canada, un congrès qui lui tient lieu de réunion officielle, le Congrès annuel de l'ACSP. L'association consacre ses efforts dans cinq domaines particuliers : les politiques gouvernementales, la pratique clinique, la formation, la recherche et la création de liens avec la communauté internationale directement impliquée dans le soin des plaies. L'Association canadienne du soin des plaies vise une amélioration significative du soin donné au patient, des résultats cliniques et de la satisfaction professionnelle des spécialistes en soin des plaies.

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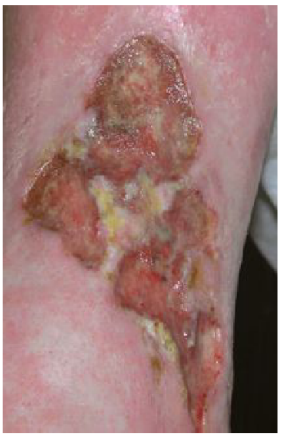

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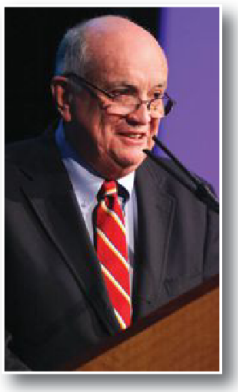

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CAWC Events

15th Annual CAWC Conference

Quebec City, QC
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Visit www.cawc.net.
See page 56 for details.

15e Congrès annuel de l'ACSP

Ville de Québec, PQ
29 octobre – 1 novembre 2009
Veuillez visiter www.cawc.net.
Veuillez voir la page 56 pour les détails.

Other Events

22nd Annual Symposium on Advanced Wound Care and Wound Healing Society Meeting

April 26-29, 2009
Gaylord Texan Hotel
and Convention Center
Dallas, TX
www.sawc.net

Canadian Association for Enterostomal Therapy 28th Annual Conference

May 27-30, 2009
Delta Regina Hotel
Regina, SK
www.caet.ca

Wound, Ostomy and Continence Nurses Society 41st Annual Conference

June 6-10, 2009
St. Louis Convention Center
St. Louis, MO
www.wocn.org

Industry News

Introducing Systagenix Wound Management: A New Global Force in Advanced Wound Care

Systagenix Wound Management was established in December 2008 by One Equity Partners to acquire the Wound Care Business of Johnson & Johnson (J&J). Systagenix recognized the value of the internationally renowned J&J wound-care-product portfolio and will continue to build upon that reputation. This portfolio includes trusted brands such as PROMOGRAN® Matrix Wound Dressing, TIELLE® Hydropolymer Dressing, and REGRANEX® (becaplermin) Gel 0.01%. Systagenix is committed to providing innovative products that help enhance the quality of life of patients. The organization promises to be a new global force in advanced wound care.

Overview of Coloplast

Coloplast is highly regarded around the world for developing innovative products for people with ostomy, urology, continence, chronic wound and skin needs. For example, the company developed the world's first disposable ostomy bag. Coloplast's key focal areas include ostomy care, urology and continence care, dressings for chronic wounds and skin-care products. Key brands include Biatain, Biatain Ag, Biatain Ibu, SeaSorb Ag, Comfeel, Assura, InterDry, Sween, SenSura, SpeediCath, Titan, Aris, Self Cath and Freedom. With headquarters in Denmark, the United States and Canada, the company is a global force in products and services for people with intimate health-care needs. For more information about Coloplast, please visit www.coloplast.ca.

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1. ConvaTec. Data on File. WHRI 3178 TA 155. 8 October 2008.

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Encouraging Patient Adherence to Therapeutic Graduated Compression Therapy in Venous Stasis Disease:

A Limited Literature Review

"It's not that people are unwilling to change.
It's that people are unwilling to be changed."[1]

BY Marjorie Fierheller, Comfort Anku, Afsaneh Alavi

Chronic venous insufficiency (CVI) and subsequent chronic venous ulceration represent a significant problem in our aging society. Although consistent use of graduated compression stockings has been associated with improved health outcomes, patient adherence to this treatment is generally found to be low. Wound-care practitioners see this as a significant challenge to providing the best care. A limited review of literature related to medical treatment adherence was undertaken, strategies and practical approaches were identified, and potential application to practice are presented. A need for research specific to wound-care practice was identified.

Background on CVI

Some degree of venous disease is evident in the legs of approximately half the adult population and as such is considered to be an "underestimated public health problem."[2,3]

Chronic venous insufficiency can ultimately lead to infection, skin changes and ulceration.[4] Venous leg ulcers can significantly affect an individual's quality of life, increase health-care costs and frequently recur.[3,5]

Treatment of CVI with or without ulceration, although manageable, often becomes a frustrating problem for the patient and practitioner alike. The chronic nature of this condition requires ongoing self-management involving lifestyle modifications, inconvenient therapies and conflicting or confusing information.[4] As the gold standard of medical management for CVI, therapeutic graduated compression stockings provide effective prevention and treatment of disease progression by controlling edema and counteracting the effects of venous hypertension.[6,7] Compression stockings can also reduce the incidence of ulcer recurrence post-healing and throughout the maintenance stage.[8]

Studies have demonstrated lower recurrence rates of venous ulceration in patients who wear their compression stockings as prescribed.[9,10] However, to date, investigations of patient adherence to this specific treatment modality are limited by lack of universal definitions for the terms *compliance* or *adherence*, wide variation in study methods, the types of assessment tools used, and inconsistency in how the desired outcome is measured.[11] Relatively high rates of venous ulcer recurrence serve to reinforce the need for compression therapy for life.[12]

The Adherence/Non-adherence Problem

Practitioners treating chronic wounds identify non-adherence to compression stockings as presenting a significant challenge to providing the best care.[13]

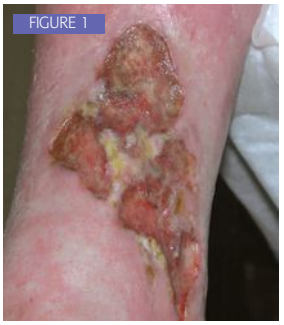
Patients have cited cost, appearance, discomfort and difficulty with application among the reasons for not following their treatment regimen as prescribed.[14,15]

Consider the case of Mrs. A and Mr. B as outlined in the case studies below:

Case Study 1

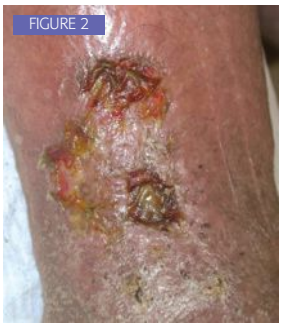
Mrs. A is a busy 35-year-old working mother of three young children, with a supportive husband. She has a history of venous stasis disease related to obesity and previous deep vein thrombosis (DVT). Painful ulceration has recurred three times in the past two years, and her ulcer has just recently healed. She would like to prevent another leg ulcer recurrence and understands that wearing her compression stockings will help. She just does not have the time or energy to get into them every morning before work and often leaves home without wearing them. She is in tears at her next clinic visit.

FIGURE 1



Mrs. A prior to healing.

FIGURE 2



Mr. B prior to complete healing.

Case Study 2

Mr. B is an 82-year-old retired policeman who lives alone. He has a long history of varicose veins, leg swelling and rheumatoid arthritis. He has just recovered from leg ulceration with severe stasis dermatitis. He does not want to go through this pain and itching again as it severely interferes with his social life. Strong support stockings have been prescribed for him. At the next clinic visit, it is discovered that Mr. B is not wearing his stockings. He angrily states that they are making his legs worse.

Literature Review and Discussion

Literature discussing the challenge of non-adherence to medical treatment is extensive and generally focuses on prescribed medication, treatment regimens such as diabetes care or health promotion/prevention strategies such as smoking cessation.[16] The problem of adherence is considered to be widespread, and studies have suggested that as few as 20 per cent of patients take their medications properly or derive full benefit from them.[17]

This is despite the fact that failing to adhere to appropriate treatment can reduce the benefit of medical treatments, compromise health outcomes, decrease quality of life and increase health-care costs.[18] Adherence rates for patients with long-term chronic conditions are found to be lower than those for patients with acute conditions, as

continued on page 14

TABLE 1

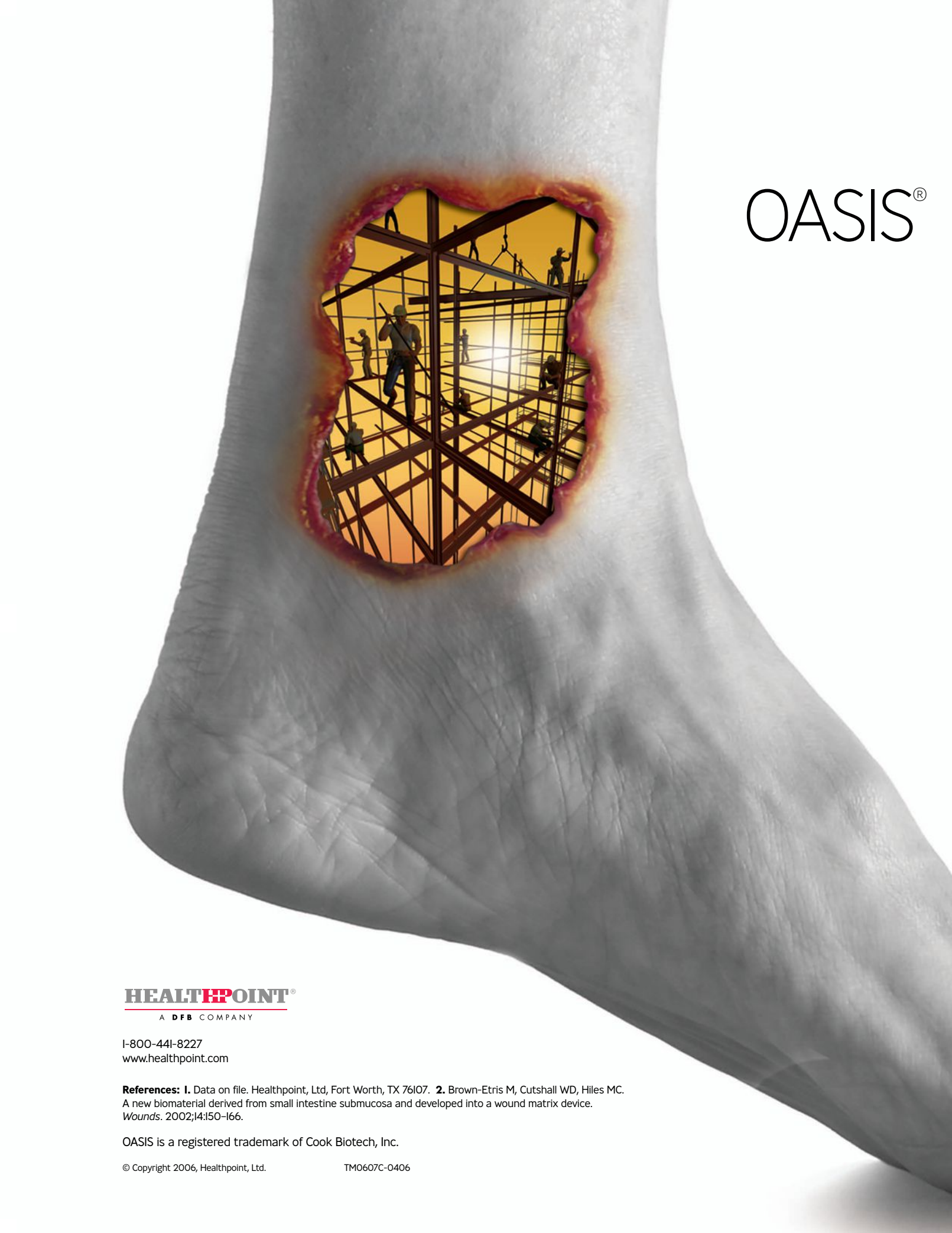
Factors that influence behaviour change

Patient Factors[20,23]	Practitioner Factors[24,25,26]	Environmental Factors[20,23]
■ medication and illness	■ communicates effectively	■ family
■ religion and ethics	■ demonstrates a caring attitude	■ social support
■ culture	■ identifies readiness for change	■ cost of treatment
■ psychological status	■ is an educator/facilitator	■ availability of treatment
■ patient expectation	■ builds on patient strengths and past experience	■ socioeconomics
■ health belief	■ has a coaching vs. controlling style	■ geography
■ readiness for change	■ demonstrates a non-judgemental attitude	■ housing
■ previous experience	■ promotes a collaborative/shared decision-maker approach	■ transportation
■ age		■ insurance coverage
■ gender		■ employment/unemployment
■ wound type and treatment		■ type of health-care facility

Marjorie Fierheller, RN, BScN, MSc, is a graduate of the IIWCC and has recently completed her MSc in Tissue Repair and Wound Healing through Cardiff University, UK, and a Clinical Teaching Certificate through the University of Toronto. She is currently enjoying new challenges as a Wound and Skin Clinical Nurse Specialist at a west Toronto acute care hospital.

Comfort Anku, RN, has a great passion for wound care. A graduate of IIWCC in 2003-2004, she is currently working on her Clinical Teaching Certificate at the University of Toronto and is the Wound and Skin Coordinator at a long-term care facility in Oakville, Ontario.

Afsaneh Alavi, MD, is a graduate of the Teaching and Learning course for health-care professionals at the University of Toronto and is international co-director and co-ordinator for the IIWCC in collaboration with the University of Toronto in Iran (2007), Saudi Arabia (2008) and United Arab Emirates-Dubai (2009). She co-authored three chapters in *Chronic Wound Care: A Clinical Source Book for Healthcare Professionals*, Fourth Edition, and a chapter in the *American Diabetic Federation* book (on diabetes and skin). She is a regular presenter at international wound conferences and has been published in wound-care and dermatology journals.



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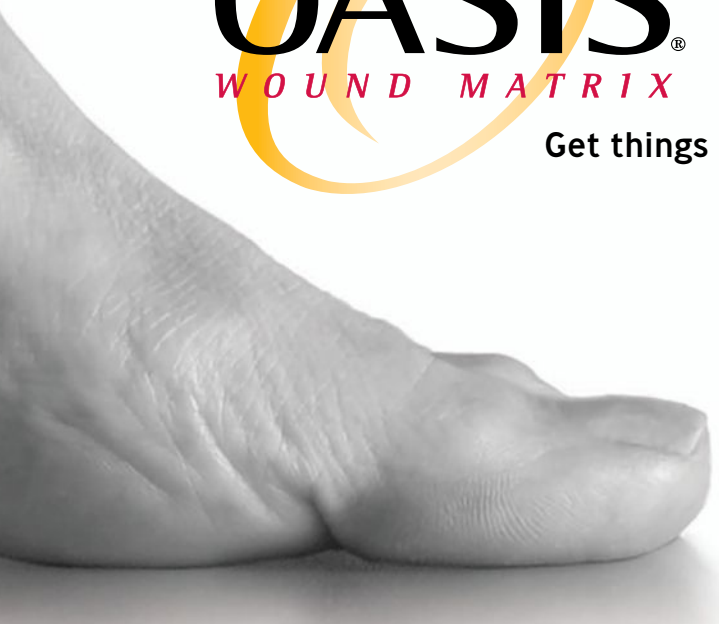

TABLE 2

Strategies that may influence adherence to medical treatment[18]

Interventions and summary of related findings

1. Technical interventions

- technological "fixes" to simplify treatment regimens and electronic monitoring devices
- effect decreases with duration of treatment

2. Behavioural interventions

- provide patients with memory aids or reminders, calendars or diaries, feedback, support or rewards that encourage self-efficacy
- use of motivational techniques
- effect diminishes over time

3. Educational interventions

- provide transfer of knowledge and concrete problem-solving skills using a variety of approaches
- outcomes improve with addition of reinforcement, feedback, patient-focus and collaboration

4. Social support interventions

- practical social support was found to provide higher effects than emotional or undifferentiated support
- practical support for a treatment regimen was better than no such support
- how social support contributes to health is not yet well understood

5. Structural or organizational interventions

- community or workplace programs specifically targeting non-adherence problems are more effective than broadly based interventions

6. Complex or multi-faceted interventions

- no single strategy showed any clear advantage over the other
- approaches combining cognitive, behavioural and affective components of the provider-patient relationship such as empathy, attentiveness, care, concern or support can be more effective than single focus

chronic illness requires disciplined daily self-management, which ultimately becomes the responsibility of the patient.[1,19]

Individuals are likely to change their health behaviour in order to feel better physically, psychologically, socially or spiritually.[20] The decision to do so can be based on a complex combination of patient, environmental, practitioner, disease, and treatment factors that may generate motivation for and/or barriers to change (Table 1).[20] Health beliefs and perception of threat have been identified as significant predictors of adherence.[21] The patient needs to be motivated, ready and willing to change their behaviour; therefore, assessment of a patient's perceived barriers and benefits to engaging in the desired behaviour is necessary.[22]

Based on the work of Kurt Lewin, the Health Belief Model is one such approach that helps to identify why some individuals are motivated to adapt a particular health behaviour while others are not.[20,27] Prochaska and DiClemente's Transtheoretical Model of Change helps us to conceptualize behaviour change by providing a framework outlining the process of how people change their behaviour.[27,28]

Maintenance of a behaviour change requires prolonged effort to avoid a relapse as the change is incorporated into daily routine and becomes a "habit of action."[29] This requires a patient's understanding, co-operation and active participation in the decision-making process to be successful.[30]

There is ongoing debate regarding which terms best describe the behaviour associated with following a prescribed medical regimen. *Compliance*, *adherence*, *concordance* and more recently *coherence* are all found in the literature.[31,32] Lack of a universally accepted definition limits strength and transferability of much related research literature.[18]

Use of the terms *compliance/non-compliance* or *adherence/non-adherence* has also been criticized for being "dysfunctional concepts" representative of a practitioner's attempt to control patient self-management choices.[1]

Collaboration or shared decision-making, defined as a "process by which patients and providers consider outcome probabilities and patient preferences then reach a health-care decision based on mutual agreement," may be preferable.[24]

Although not a new concept, it is one that fits well with that of patient choice and adherence. Patients engaged in shared decision-making have a greater sense of personal control or empowerment, lower levels of concern about their disease, are more satisfied with their treatment and experience positive treatment outcomes.[24,33] Although most patients strongly prefer to be involved in decision-making, its value has been questioned in medical emergency situations, in patients over 60 years of age or those who feel hopeless or anxious, and in the presence of language and cultural barriers.[24,26]

Quality of the practitioner-patient relationship has been identified as an important factor influencing a patient's treatment choices.[34] Due to their direct access

to the public, primary care clinicians become a "principal source of influence on health behaviour."[35] In a successful patient-practitioner relationship, effective communication facilitates not only service delivery, but also effective implementation of the treatment plan through increased understanding and patient adherence, improved health outcomes and improved social outcomes such as patient and clinician satisfaction.[36] A patient who feels that their contribution is valued will more comfortably share personal preferences and goals, thus enabling the practitioner to determine how this can be accommodated within the best available treatment options.[24] This type of health-care provider becomes a "coach" who provides the tools, encourages their use and offers support, thereby empowering the patient to develop self-sufficiency, build confidence and move forward with their own personal goals.[37]

Practitioner-patient communication that includes the relationship tasks of engagement, empathy, education and enlistment has the potential to increase the benefits and effectiveness of a health-related encounter by building on the "power of the clinician-patient relationship."[35,36,38] Creating an empathetic bond facilitates emotional and physiological engagement and caring.[25] Listening to and understanding the patient's story therefore becomes an important part of integrating this type of communication model into an individualized treatment plan.[36]

The literature discussing strategies to improve medical treatment adherence is extensive. Differences in methodology, definitions and measures of adherence limit the strength and transferability of findings.[39] Current methods for improving treatment adherence in chronic illness are considered to be complex, ineffective and inadequately researched.[40] Dulmen et al conducted a meta-analysis of 38 systematic reviews (a "review of reviews") of the effectiveness of medical treatment adherence interventions published between 1990 and 2005.[18] Twenty-three studies with significant differences between interventions were reviewed and strategies found to improve adherence were identified (Table 2). None of these studies were found to address treatments or lifestyle changes specific to the treatment of chronic wounds.

Developing Effective Strategies

As patient behaviour is influenced by a complex combination of both intrinsic and extrinsic factors, wound-care practitioners need to develop useful and practical strategies that can help to optimize treatment

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TABLE 3

Encouraging adherence to compression stockings in patients with CVI: Approaches and strategies

Adherence approach	Adherence strategy
1. Establish a caring relationship with patient through appropriate use of therapeutic communication skills.[36,38]	Listen to their story and identify main concerns.
2. Identify individual's level of readiness/motivation for change.[28]	How important is this to you?
3. Identify individual's barriers to change.[28]	What is your previous experience?
4. Encourage patient participation in the shared decision-making process regarding treatment options.[24]	Collaborate/negotiate.
5. Assess patient's level of knowledge and need/desire for more information.[23]	Provide the right amount of non-judgemental information.
6. Create an individualized education plan.[23]	Information helps patient develop the problem-solving skills needed to find workable, real-life solutions.
7. Maximize social support.[18,23]	Provide follow-up and ongoing support/encourage family involvement/access community resources (health-care team vs. individual practitioner).

outcomes. Based on this limited literature review, approaches that could potentially be applied to patients with chronic venous insufficiency to encourage adherence to ongoing treatment with compression stockings have emerged. Some of these have been combined to create Table 3.

Wound-care practitioners for Mrs. A and Mr. B were able to significantly improve adherence to ongoing compression stocking treatment and help prevent ulcer recurrence specifically by:

1) Actively listening and establishing an empathetic bond with their patients.
2) Recognizing that readiness/motivation to change is evident by the patient's desire to find a workable solution to prevention of ulcer recurrence.
3) Identifying that physical limitations make stocking application time-consuming, painful and difficult.
4) Initiating discussion regarding solutions to difficult compression stocking application in order to identify gaps in knowledge.
5) Providing non-judgmental information specific to these gaps re: stocking types, aides for stocking application and other methods of reducing leg edema such as leg elevation, exercise and weight loss.
6) Engaging in shared decision-making and problem-solving to find individualized solutions to empower the patient (reconsider type/strength of stockings and how best to apply them based on the patient's situation and choice).
7) Involving family and community resources in treatment and the scheduling of follow-up appointments for reinforcement of teaching, re-evaluation of treatment, support and encouragement.

A limited review of literature related to medical treatment adherence has been presented and considered in relation to patients with chronic venous stasis disease. It is evident that this is a complex concept and that existing literature, although extensive, is rarely specific to patients with chronic wounds. Studies are limited by varied methodology, lack of universal definitions or measurement outcomes. Although transferability of findings within a wound-care setting is uncertain, approaches have been identified that may have universal application.

Strategies grounded in behaviour-change theory and existing adherence research have the potential to empower patients and practitioners, encourage adherence to treatment, and thus improve wound-care outcomes. Wound-care practitioners need to develop practical strategies to address the challenge of treatment adherence in order to optimize care. This is an area where future research is urgently needed.

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The Importance of Monitoring Hydration Status in Our Clients

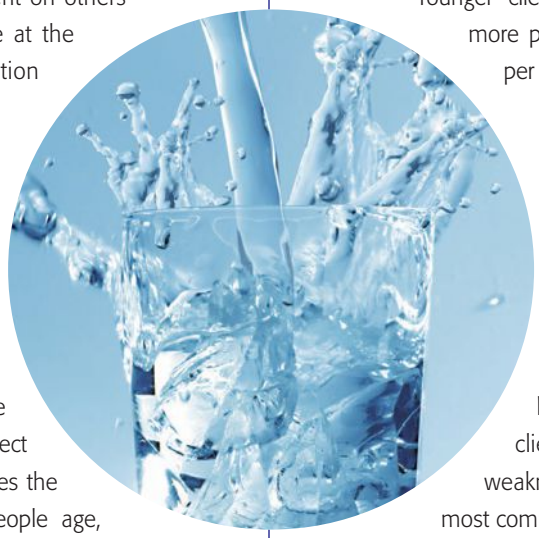
BY Chris Fraser

Chris Fraser, HBSc, RD, provides nutrition intervention for patients in the spinal cord injury and acquired brain-injury rehabilitation programs at the Parkwood Hospital site of St. Joseph's Health Care in London, Ontario, and is a member of Parkwood's Chronic Wound and Skin Health Team. She has presented on nutrition and wound management extensively throughout Canada and has been a frequent author of wound-related articles. She is a member of the College of Dietitians of Ontario and Dietitians of Canada.

Most people do not think of water as a nutrient, but it is! In fact, water is the most essential of all nutrients. The average adult body can live for weeks without food, but for only days without water.

Dehydration is a risk factor for impaired skin integrity, and the presence of a wound can predispose a client to dehydration and malnutrition, resulting in a vicious cycle of skin breakdown, malnutrition, and dehydration.

Clients who are dependent on others for eating and drinking are at the highest risk for malnutrition and dehydration.



Dehydration in the Older Adult

Dehydration is among the most common reasons for hospitalization in older adults. Physiological changes occur during the aging process that can affect fluid balance, which increases the risk for dehydration. As people age, total body water decreases, resulting in a decreased fluid reserve. Decreased ability of the older kidney to concentrate urine, decreased thirst sensation, changes in hormonal levels that affect the kidney and hydration status, effects of medications such as diuretics, changes in mobility, cognition and independence, and self-imposed fluid restriction because of fear of incontinence or nocturia are just some of the other factors that increase the risk of dehydration in the older adult.

Hydration Status = Intake minus Output

It is essential that as health-care providers we closely monitor our clients' fluid intake, compare intake to assessed fluid requirements and be aware of the potential signs and symptoms of dehydration. The recommended fluid intake for hydrated clients without abnormal losses is generally 27–30 mL per kilogram of body weight. The minimum fluid consumption for older adults is 1,500 mL per day. Younger clients may need 35 mL or more per kilogram of body weight per day.

It is equally imperative that routes and extent of fluid losses be identified and considered. Even small fluid losses equalling three to six per cent of body weight (e.g., a 1.7–3.4 kg [3.75–7.5 lb] loss in a 56.8 kg [125 lb] client) can cause fatigue, weakness and confusion. The most common routes of fluid loss are:

- the gastrointestinal tract, with excessive losses occurring with frequent loose stools/diarrhea, overuse of laxatives and vomiting
- the urinary tract, with excessive losses occurring with diuretic use and uncontrolled diabetes
- fever/sweating
- wound exudate
- negative pressure therapy and air-fluidized beds
- the respiratory tract, with greater losses occurring with conditions that elevate the respiratory rate

Parameters of Hydration Status

A client's hydration status can be measured via several parameters.

Weight—mild to severe dehydration can manifest as a rapid five to over 10 per cent loss in body weight.

Blood pressure—low blood pressure or orthostatic hypotension (a rapid drop in blood pressure when going from lying to sitting or from sitting to standing) may indicate dehydration.

Urine output—a reduction in urine production from typical volumes generally indicates a decrease in fluid intake.

BUN:serum creatinine ratio—an elevated blood urea nitrogen (BUN) level with a normal or low serum creatinine level may indicate under-hydration; however, an elevated BUN alone may not be an accurate indicator of hydration status, especially in clients with renal impairment. A BUN:serum creatinine ratio greater than 20:1 is a red flag for dehydration.

Serum sodium—an elevated serum sodium level may indicate dehydration; however, because other factors may impact the serum sodium level this should not be used alone to identify dehydration.

When dehydration has been identified and a rehydration plan has been initiated, it is important to monitor the client's alertness, urine output, blood pressure, pulse and daily weight.

Consequences of Dehydration

Dehydration is one of the most common nutrition-related problems in long-term care; it can be life threatening and may result in the following:

- decreased physical and cognitive functional abilities, lethargy and confusion
- impaired balance and increased risk for falls and fractures
- increased risk for urinary tract and other infections
- decreased skin turgor and elasticity resulting in skin tears, shear injuries and pressure ulcers
- constipation and fecal impaction/obstruction
- ischemia and myocardial infarction
- renal failure
- death

Signs and symptoms that your client is dehydrated

- Decreased urine output
- Dark, concentrated and/or strong-smelling urine
- Frequent urinary tract infections
- Dry lips/mouth and thick, stringy saliva
- Constipation
- Dizziness when sitting up or standing
- Confusion or change in mental status
- Weight loss of 1.5 kg (3.5 lb) in less than seven days
- Fever
- Decreased skin elasticity, such as on the arm that, when gently pinched, does not spring back into place but remains "pinched up" when released
- Sunken eyeballs

Fluid Needs for Health

Most people need at least eight cups of non-caffeinated fluids daily. Drinks that contain caffeine, such as coffee, tea and cola, should be taken in moderation only. The best way to ensure that your client consumes at least eight cups of fluids daily is to make available and encourage intake of water, juices, milk, broth and other non-caffeinated beverages.

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Risk factors or "clues" that your client may be at risk for becoming dehydrated

- Dysphagia (swallowing difficulties), especially with thin fluids
- Refusal of fluids at meal/snack times (this may be seen with dysphagia)
- The need for assistance with eating and drinking
- Lack of or blunted thirst sensation
- Inability to communicate thirst and other needs
- Memory problems/forgetfulness
- Presence of an illness that increases fluid lost from the body (e.g., vomiting, diarrhea, fever with sweating, uncontrolled diabetes)
- Fluid losses (e.g., from urine, diarrhea, vomiting, sweating, drooling) are greater than fluid intake
- Regular use of medications such as diuretics, laxatives or enemas
- Intentional fluid restriction for fear of bladder incontinence/nocturia

TABLE 1

The approximate fluid provision from common foods

Food	Serving size	Approx. fluid provided
Jelly dessert/gelatin	125 mL (1/2 cup)	120 mL
Pudding	125 mL (1/2 cup)	100 mL
Ice cream/sherbet	125 mL (1/2 cup)	60 mL
Popsicle	1 popsicle	90 mL
Yogurt	125 mL (1/2 cup)	90 mL
Canned fruit	125 mL (1/2 cup)	100 mL
Soup	375 mL (1 1/2 cups)	165 mL

Some foods—such as jelly dessert, pudding, ice cream, soup and canned fruit—contain or are made with enough fluid that they can significantly contribute to a client's fluid needs (Table 1).

Dysphagia (swallowing problems)

Some clients may not be able to safely drink thin (regular) liquids. If your client has been appropriately assessed and advised to avoid thin fluids, it may be recommended that the following fluids and food items be avoided:

- water, ice cubes, ice chips
- soft drinks, all juices
- milk
- tea/coffee
- broth and cream soups
- liquid supplements/meal replacements
- ice cream, sherbet, milkshakes, jelly dessert

Individual recommendations and/or exceptions may be made based on individual client assessment. Ice cream, sherbet, milkshakes, jelly dessert, ice cubes and ice chips may not seem like thin fluids, but if they sit out at room temperature or are held in the mouth before swallowing they will melt and become thin, and are therefore considered thin fluids.

Table 2 shows a sample plan giving the number and volume of fluid products of pudding consistency that are needed throughout the day to provide approximately eight cups (2 L) of available fluid to meet a client's fluid needs.

Please note that this is just an example, and may not apply to your client on thickened fluids. It is recommended that a registered dietitian be consulted to individualize a thickened fluid plan to meet a client's hydration needs.

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TABLE 2

A sample thickened fluid plan

This sample thickened fluid plan specifies fluid provision only and does not include foods consumed in meals and snacks; foods are over and above the fluid sources indicated.

Meal/snack	Thick fluid	Serving size
Breakfast	Thick juice	250 mL (1 cup)
	Pureed fruit	125 mL (1/2 cup)
	Thick, set-style yogurt	250 mL (1 cup)
Morning snack	Thick juice	250 mL (1 cup)
	Pudding	125 mL (1/2 cup)
Lunch	Thick strained soup	250 mL (1 cup)
	Thick juice	250 mL (1 cup)
	Thick milk or pudding	125 mL (1/2 cup)
Afternoon snack	Pureed fruit	250 mL (1 cup)
Dinner	Thick soup	250 mL (1 cup)
	Thick juice	125 mL (1/2 cup)
	Pureed fruit or pudding	125 mL (1/2 cup)
Evening snack	Thick juice	125 mL (1/2 cup)

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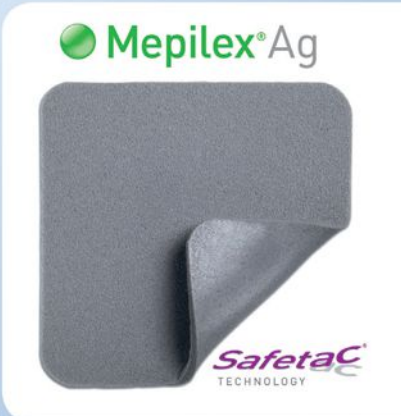

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1,2 Data on file.

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MÖLNLYCKE HEALTH CARE

The Nursing Practice of Conservative Sharp Wound Debridement:

Promotion, Education and Proficiency

BY Ruth J. Harris

Abstract

Wound debridement is essential for optimal wound care. Conservative sharp wound debridement (CSWD) of devitalized tissue is considered the quickest and most cost-effective method of wound debridement, but it carries a high level of clinical risk and may not be appropriate for all patients or in all health-care settings.[1] CSWD is a specialized level of wound care that requires practice-based, mentored educational preparation and a regulatory process for ongoing competency assessment. Based on therapeutic outcomes, not offering CSWD as a wound-care option may have legal, ethical and economic implications for health-care facilities. Both collectively and individually, nurses must be responsible for their practice standards, with the aim of promoting clinical competency beyond proficient and toward an expert level. CSWD is a valuable tool for wound care, but it is best practised within a supportive, multidisciplinary framework that promotes safe, ethical and competent care.

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Introduction

Worldwide demand for specialized nursing is increasing both in volume and in the complexity of wound-care treatments in acute care, community and residential health-care settings. Recognized wound-expert nurses are enterostomal therapy (ET) nurses in Canada, tissue viability nurses in the UK, and wound, ostomy and continence nurses in the U.S. While the need for in-depth wound-care nursing expertise is expanding, many experienced ET nurses in Canada are nearing retirement. At the same time, regulations are becoming more stringent for professional competencies in this field. Ethical, legal, accreditation and quality-of-care concerns drive the governing authorities (e.g., health-care employers, professional regulatory bodies, government agencies) to promote wound-care practice standards.

Worldwide diversity in wound care has resulted in the formation of international societies and associations with the unifying aim of defining common terms and establishing comprehensive guidelines that will build toward universal standards in this field.[2] Wounds such as pressure ulcers and lower leg venous, arterial, neuropathic, or diabetic ulcers are plaguing international health-care systems and exhausting staff and resources. In Canada, the Registered Nurses' Association of Ontario (RNAO) has published best practice guidelines on each of these wound-types.[3] As an ET and a hospital liaison/discharge planning nurse, I see the frontline impact of multiple hospital admissions and/or delayed discharges directly related to wound-care

For additional resources related to this article, please visit the *Wound Care Canada* Web site at www.cawc.net/open/wcc/7-1/harriswc.pdf.

issues spanning acute, community and residential care.

While wound care varies around the world, there is universal consensus with historical and current literature documentation agreeing that the removal of exudates and devitalized tissue from wounds is essential for healing.[4,5,6,7,8,9] "Debridement" is the common term for the process of removing wound debris. There are several methods of debridement (Table 1), but it is generally agreed that the most economic and rapid way to clear out a wound is by sharp wound debridement.[10,11]

Definitions

Debridement comes from the French word *debrider*, meaning to unbridle, as it compares the constricting bands of tissue to bridles.[12] It was probably first used by surgeons working several hundred years ago in war zones who recognized that grossly contaminated soft-tissue wounds had a better chance of healing (and the soldier surviving) if the affected tissue was surgically removed to reveal a healthy, bleeding wound surface.[6] Early descriptions of debridement date back to Hippocrates, who described the deleterious effects of leaving necrotic tissue in wounds.[7] Debridement is medically defined as the removal of foreign material and devitalized or contaminated tissue from or adjacent to a traumatic or infected lesion until surrounding healthy tissue is exposed.[13]

CSWD is the removal of dead tissue, with a scalpel or scissors, above the level of viable tissue.[14] CSWD is probably the most aggressive type of debridement performed by non-physician health-care providers such as wound-care nurses, but if it is performed correctly and viable tissue is not exposed then there should be no danger.[7] While the CSWD technique is simple, it does require skill with sharp instruments to avoid aggravating the wound.[15] While wound debridement

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is defined within the domain of nursing, CSWD is a specialized level of wound care requiring practice-based mentored educational preparation and a regulatory process for ongoing competency assessment.[16,17,18,19]

Literature Review

Supportive data from classic and current literature explain the essential role of debridement in optimal wound management as it facilitates visualization of the wound wall and base for accurate, thorough assessment and treatment. It reduces the bioburden (i.e., volume of pathogenic microbes) of the wound by removing necrotic tissue and foreign matter (devitalized tissue supports bacterial growth with increased risk for wound infection), and it interrupts the cycle of the chronic wound at the molecular level so that protease and cytokine levels more closely approximate those of the acute healing wound.[10,20,21,22,23,24] The outcomes of not debriding wounds are increased risk of infection, ongoing inflammation, compromised restoration of skin function, abscess formation, malodour, inability to assess wound depth, nutritional loss through exudates, poor clinical and cosmetic outcome, delayed healing and psychological stress.[1,8]

Numerous studies have attested to the therapeutic and economic impact of CSWD in wound care. It can potentially prevent hospital admission or decrease length of stay, and decrease overall nursing care time, wound infection and wound-care costs while promoting wound healing and improving patient quality of life.[24,25,26,27]

Similar agreement exists on the need for specialized education and skill training for competency in this field for nursing.[1,18,19] CSWD requires a high level of skill and experience because practitioners must have the necessary knowledge and training to complete the task safely and effectively, and to be able to deal with complications as they arise.[6] Professional and educational qualifications required to perform CSWD have been proposed by numerous experts.[1,28,29,30,31,32]

The clinical governance framework has highlighted that health-care clinicians frequently perform debridement without having received formal education and training.[33,34] Knowing when not to debride (e.g., ischemic limbs, palliative, non-healable wounds, increased bleeding tendencies) and how to avoid preventable complications is also critical to wound care.[5] Clinical governance, which includes risk management, clinical audit and evidence-based practice, aims to help all clinicians to improve quality and safeguard standards of care, and seeks to ensure that health professionals have the right training, skills and competencies to deliver the care needed by patients.[30]

Education

In this era of clinical governance, self-education is not adequate training for wound-care practitioners to

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TABLE 1

Methods of debridement

Autolytic—Makes use of the body's own natural and highly selective ability to dissolve non-viable tissue. This technique requires keeping the wound moist with occlusive or semi-occlusive dressings (e.g., hydrocolloid, transparent film, hydrogel) that trap the endogenous proteolytic enzymes, immune cells, and growth factors. While generally low cost and painless, this method takes the longest to work and is inappropriate for infected wounds.

Biological—Maggots have been used since antiquity. The larvae of *Lucilia sericata* (greenbottle blowfly) are applied to the wound. These organisms can digest soft necrotic tissue, cellular debris, serous drainage, and pathogenic bacteria (e.g., MRSA) while releasing growth-promoting secretions. This method is rapid, selective, and generally painless, but patients and staff must be psychologically prepared for this therapy. Maggots are imported from the U.S. and require a moist confining dressing that needs to be changed every one to three days to reapply fresh larvae or discontinue if the wound bed is clean.

Enzymatic—Involves agents that break down necrotic debris and for use on eschar formation. This method is fast-acting and highly selective, but requires a prescription. These products are currently not available in Canada.

Mechanical—Physical removal of debris from a wound. The outdated method of wet-to-dry dressings is considered unacceptable because it is tissue non-selective, costly, time-intensive, and prone to causing pain, bleeding and wound trauma. Other mechanisms include irrigation, pulsative lavage and whirlpool therapy, but physical force may be damaging to granulation and epithelial tissue in the wound bed and margins.

Sharp or surgical—Uses a scalpel, scissors or other sharp instrument to cut non-viable tissue or remove debris from a wound. This is the quickest and most efficient method of debridement. If the target tissue is deep, close to another organ, or if the patient is experiencing extreme pain then the procedure may require an operating room, anaesthesia and a surgeon. This is the preferred method for rapidly developing inflammation or systemic infection, but is not recommended for malignant wounds. Sharp debridement by a trained clinician would be limited to the removal of non-viable tissue and not result in bleeding.

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TABLE 2

Conservative sharp wound debridement (CSWD): Current nursing policies across Canada

Alberta	▪ College and Association of Registered Nurses of Alberta (CARNA): www.nurses.ab.ca ▪ CARNA regulation 15(1)(a) authorizes regulated members to cut a body tissue or perform other invasive procedures on body tissue below the dermis or the mucous membrane. It is not intended to allow RNs to perform surgery, but to allow for deep wound debridement, provided the standards for the performance outlined are followed and applied appropriately: www.nurses.ab.ca/Carna-Admin/Uploads/HPA%20-%20Restricted%20Activities.pdf.
British Columbia	▪ College of Registered Nurses of British Columbia: www.crnbc.ca ▪ The BC government is currently developing a regulation that will set out the master list of reserved actions. A complete list of reserved actions recommended by the Health Professions Council is available at www.healthservices.gov.bc.ca/leg/hpc/review/reserved-list.html. ▪ The Nurses (Registered) and Nurse Practitioners Regulation sets out the reserved actions from this list that are within the scope of practice of RNs: www.crnbc.ca/downloads/433-scope.pdf.
Manitoba	▪ College of Registered Nurses of Manitoba: www.crnm.mb.ca ▪ Regulations are being developed to allow RNs who meet the regulations to perform minor surgical and invasive procedures designated in the regulations: http://cms.tng-secure.com/file_download.php?fFile_id=176.
New Brunswick	▪ Nurses Association of New Brunswick: www.nanb.nb.ca ▪ No policy or position statement on CSWD ▪ Nurses use a decision-making tool for nursing practice guidelines: www.nanb.nb.ca/pdf_e/Publications/General_Publications/Decision-making_in_clinical_nursing_practice_English2k8.pdf.
Newfoundland and Labrador	▪ Association of Registered Nurses of Newfoundland and Labrador: www.arnnl.nf.ca ▪ No policy or position statement on CSWD ▪ A provincial wound-care committee is addressing wound-care policies, including CSWD.
Northwest Territories and Nunavut	▪ Registered Nurses Association of Northwest Territories and Nunavut: www.rnanntu.ca ▪ Nurses refer wounds for CSWD procedures to a physician/surgeon.

carry out CSWD. Specialist nurses in the UK have drawn up a workable procedure for training and practice for wound debridement (see Web Connect).[33] Their innovative CSWD nursing school in London crossed traditional boundaries and required multidisciplinary collaboration between education and practice.[1] There is a need for Canadian CSWD competency assessments and a comprehensive multidisciplinary education framework that encompasses wound-care best practices, legal and ethical issues, research and technological developments, health and safety concerns, advocacy, and in-depth psychosocial patient care.

Competency is not isolated skill demonstration, but rather skill application in a contextual patient situation involving assessment and differential diagnosis for the development and application of a plan of care, evaluation and reassessment.[35] Competency assessment has been a concern in all health-care areas since 1997, when the Joint Commission on Accreditation of Healthcare Organizations incorporated competency language into its indicators.[36]

For CSWD, a suitably qualified mentor is mandatory for the achievement of competence in sharp debridement.[1] Presently, many Canadian ET and experienced wound-care nurses are nearing retirement. It would be timely to approach these expert wound-care profes-

Nova Scotia	▪ College of Registered Nurses of Nova Scotia: www.crnns.ca ▪ No policy or position statement on CSWD ▪ CSWD directives come from the organization by which the nurse is employed—for example, burn and vascular nursing policies where nurses can surgically debride with a physician's order at Capital Health in Halifax: http://access.med6worxx.com/CMS/cdha/Production/default.aspx?page=DocumentRender&class17.Id=30
Ontario	▪ College of Nurses of Ontario (CNO): www.cno.org ▪ Registered Nurses' Association of Ontario (RNAO): www.rnao.org ▪ No legislation specific to CSWD procedure ▪ A CNO practice standard addresses decisions about procedures and authority for practice settings and individual nurse considerations: www.cno.org/docs/prac/41071_Decisions.pdf ▪ RNAO recommendation 3.2e: "Sharp debridement must be conducted by a qualified person": www.rnao.org/Storage/29/2371_BPG_Pressure_Ulcers_I_to_IV.pdf
Prince Edward Island	▪ Association of Registered Nurses of Prince Edward Island (ARNPEI): www.arnpei.ca ▪ As a regulatory body, ARNPEI does not have specific scopes of practice for the wound-care/enterostomal nurse; rather, role specifications are employer- and organization-driven.
Quebec	▪ Ordre des infirmières et infirmiers du Québec: www.oiiq.org ▪ Association des infirmières et infirmiers d'urgence du Québec: www.aiiuq.qc.ca ▪ Legislation allows for nurses to perform CSWD if they have the theoretical knowledge, technical skills, and authorization from their employer to do so.
Saskatchewan	▪ Saskatchewan Registered Nurses Association: www.srna.org ▪ No policy or position statement on CSWD ▪ Nurses operate by transfer of function from physicians
Yukon	▪ Yukon Registered Nurses Association: www.yrna.ca ▪ Scope of practice: the activities nurses are educated and authorized to perform, as established through legislated definitions of nursing practice complemented by standards, guidelines, and policy positions issued by nursing regulatory bodies: www.yrna.ca/pdf/Standards2005.pdf
First Nations and Inuit	▪ Health Canada: www.hc-sc.gc.ca ▪ No statement on CSWD ▪ Guidelines include only mechanical debridement: "using aseptic technique, remove devitalized tissue; avoid taking healthy tissue": www.hc-sc.gc.ca/fniah-spnia/pubs/services/_nursing-infirm/2000_clin-guide/chap_09c-eng.php#9-16

sionals to promote their role as mentors to emerging wound-care clinicians. It would be a loss to Canadian health care nationally and wound care locally if these skilled experts were not used in expanding this CSWD experiential learning process. More funding, clinical time and resources need to be allocated to facilitate this opportunity.

Policies and Regulations

Governmental agencies and professional regulatory bodies are establishing limits and conditions on nurses' scope of practice and developing directives, including CSWD. In the U.S., RNs can perform sharp debridement as long as they have taken a recognized wound course, had supervised clinical practice, and their employer facility policies and procedures reflect the RN's capacity to perform these skills.[19,28]

In Western Canada, because RNs are now covered by the Heath Professions Act, CSWD has been declared a "restricted activity" in Alberta and a "reserved action" in BC.[16,17] Only those acts determined to pose significant risk to the public and legislated as "restricted" (or "reserved") are "exclusive" in that only those professions who are authorized to perform each restricted activity may legally do so, based on individual practitioner competence.[16] Ontario has similar legislation,

with regulations under the Nursing Act and "controlled acts" authorized by the Regulated Health Professions Act, 1991 (Table 2).

The Health Professions Act would replace existing exclusive scopes of practice with practice statements that allow for overlapping scopes of practice between professions.[16] Several professional groups (e.g., nurses, physicians, physiotherapists, podiatrists) will have the authority to perform CSWD. Interdisciplinary co-ordination and collaboration will be critical elements in organizing the delivery of care. The context of the practice situation will determine the extent to which a health professional will practise within the full scope of a restricted activity or reserved or controlled act. The introduction of a regulatory framework for CSWD will have many implications for health-care staff, managers, educators, researchers and patients.

Implementing Strategies

The Capital Region in Edmonton, Alberta, has successfully used surveys, literature review and a peer-review process to create a departmental culture that is open to practice-based learning.[34] In their three-tier model, the third and most invasive level of debridement is only done in conjunction with a physician and in a tertiary care facility. Second-level debridement is done after return demonstration and delegation by an ET nurse. First-level debridement can be done in a home setting. These first and second levels of sharp debridement only use scissors and forceps to excise vertical, loosely adhering devitalized tissue and are performed by home-care nurses in the community, not in acute or residential settings. Directives in Alberta also limit this debridement to certain body areas (exclusive of the head or neck) and do not allow portability of CSWD from one context to another facility.[16]

Health Canada is working to facilitate and support the implementation of a strategy on Interprofessional Education for Collaborative Patient-Centred Practice across all health-care sectors.[37] Many ET nurses were pioneers in the field of interdisciplinary team-building in wound, ostomy and continence care. By practising as a team, health-care professionals are able to balance the amount of responsibility and the workload, particularly in challenging wound-care cases.[38] The goal for interdisciplinary professionals will be to steer around turf wars for their mutual benefit to arrive at successful patient-care outcomes.[39,40]

Available and future technology (e.g., digital cameras, portable computers, video-conferencing) can enhance ongoing communication and feedback with mentors and referral clinicians. However, this cannot be substituted for initial and on-site mentoring for direct skill observation and clinical judgment practised in CSWD. According to Benner's five clinical levels of nursing (See Web Connect), "competency" is only the midpoint from novice to expert.[41] The aim is to move toward mastering CSWD—particularly as wound care needs more expert practitioners.

Wound-care practitioners should anticipate future debridement techniques and precision tools that will allow for more selective, discerning debridement options. One example is the increasing use of lasers, which both cut and cauterize, as a high-tech alternative that may provide more accuracy and safety for clinicians and patients.[42]

Conclusion

CSWD of devitalized tissue is considered the quickest and most cost-effective method of wound debridement, but it carries a high level of clinical risk and may not be appropriate for all patients or in all health-care settings.[1,24,43] However, not providing this essential service may become an ethical, economical, accreditation and legal issue for health-care providers. Promoting wound-care specialists (e.g., nurses, physiotherapists, physicians) to be available, accredited and accountable to provide CSWD will facilitate cost-effective patient outcomes in wound care.

Both collectively and individually, health-care professionals must be responsible for their practice standards. Before clinicians embark on debridement of chronic wounds they must ensure that they have the necessary skills to perform the task, the skill is within their scope of practice, and there is an agency or institutional policy in place to support them.[8] CSWD is a valuable tool for wound care, but is best practised within a supportive, multidisciplinary framework that promotes safe, ethical and competent care.

continued on page 30

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A Model for Implementing Best Practices in Wound Care in a Hospital Setting

BY Morty Eisenberg

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Introduction

Best practice has become the buzz phrase of this millennium for clinicians, accreditors and quality assurance experts in health-care systems worldwide, and its importance is gaining momentum. Best practice can be described as an integration of evidence-based medicine (the current best research available), expert opinion and patient acceptance.[1] Nowhere is this concept more apparent than in the relatively "new" science of advanced wound care (AWC). AWC is based on principles that are often far removed from traditional medical wisdom. This is because evidence-based research has shown that the old concept of keeping wounds dry and sterile, often through the liberal use of antiseptic agents, does not promote healing. This is particularly true when dealing with compromised wounds with poor healing ability.

Recognizing that AWC improves patient outcomes, the clinical and administrative staff at St. John's Rehab Hospital have strongly supported the adoption of best practices in wound care for our facility. St. John's Rehab Hospital is a 160-bed facility in north Toronto that offers specialized rehabilitation programs for patients with amputations, cancer, cardiac surgery, stroke, multiple trauma and complex musculoskeletal injuries. It is also the site of Ontario's only dedicated burn program and Canada's only organ transplant rehabilitation program. In recent years, many hospitals have responded to the need to provide AWC services by establishing wound-care consultation services and/or wound-care clinics run by qualified practitioners. Our goal was somewhat different. We set out to implement a program that would allow all of our health-care professionals to develop expertise in wound care and prevention.

Assessing Need

Before any significant educational program is undertaken, a learning needs assessment is required to help guide the educational activities and ensure that the needs of the audience are met. A variety of techniques and sources can be used for assessing need, including surveys, questionnaires, interviews, new technologies and professional standards or requirements.[2] In our facility, it was the attainment of professional standards that guided our program. It was understood that we would be teaching an inter-professional group that included nurses, physicians, physiotherapists, occupational therapists, chiropodists, pharmacists and dietitians. Because the most frequent type of wound encountered in our facility is the pressure ulcer, we decided to focus our initial efforts on AWC principles as they relate to the prevention and treatment of pressure ulcers.

Goals/Objectives

Once the need was established, several goals were formulated to ensure our success (Table 1). A number of educational objectives were also developed to help us meet our ultimate goal of establishing best practice for the prevention and treatment of pressure ulcers. Our aim was to ensure that, following completion of the education program, clinical staff would be able to achieve the six objectives listed in Table 2.

continued on page 34

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TABLE 1

Goals formulated to establish a successful wound-care program

1. Creation of a hospital interprofessional wound-care committee
2. Implementation of an inpatient wound consultation service
3. Introduction of the Braden Scale on all clinical units
4. Modifications to the hospital wound-care formulary
5. Development and institution of an interprofessional, multifaceted education program, with an initial focus on the prevention and treatment of pressure ulcers. Special attention was paid to utilizing principles of adult learning theory.

Implementation

In January 2006, our Medical Advisory Committee mandated the creation of the Advanced Wound Care Committee (AWCC). This interdisciplinary committee was composed of 15 members representing seven clinical disciplines: medicine, nursing, physiotherapy, occupational therapy, chiropody, pharmacy and dietary services. The first order of business was organizing a baseline point-prevalence study of pressure ulcers in our hospital and introducing the Braden Scale for Predicting Pressure Sore Risk on all inpatient units. The AWCC also monitored the development and implementation of our multidisciplinary educational program and began work on a hospital-wide wound-care formulary.

Soon after the AWCC was established, an inpatient wound consultation service became operational. Besides helping to manage patients with difficult wounds, consultations provided an ideal opportunity for one-on-one wound-care teaching.

The initial point-prevalence study was completed to give us a sense of the magnitude of our pressure ulcer problem. The purpose of a point-prevalence study in this area is to determine the percentage of patients with pressure ulcers in a facility at one point in time.[5] Not only does this information provide insight into the magnitude of the problem, but it is very useful for monitoring the effectiveness of wound-prevention programs. A second pressure ulcer point-prevalence study was carried out 11 months later, and a third and final study was carried out at 19 months to gauge program effectiveness—specifically pressure ulcer prevention.

Following a thorough nursing in-service program, the Braden Scale for Predicting Pressure Sore Risk assessment tool was introduced for use on each clinical unit. This screening tool demonstrates good sensitivity and specificity when determining pressure ulcer risk.[5] Now, every patient admitted to our facility is assessed for their risk of developing pressure ulcers, and appropriate preventative measures are put in place for those who require them.

The main focus of our strategy to achieve best practices in wound care was the education program, and much time and effort was spent on its design and execution. Our target audience was the entire hospital clinical staff. In order to capture as many staff as possible (taking into account shift work and holidays), the seminars were repeated weekly for a month. Each seminar consisted of an identical one-hour, interactive PowerPoint presentation and was preceded by a pre-test and finished with a post-test and evaluation.

For each seminar we tried to create an informal atmosphere and utilize interactive learning techniques

TABLE 2

Educational objectives

1. Identify factors that can be modified to provide an optimum environment for the prevention of pressure ulcers (surfaces, moisture and incontinence, pain control, level of activity, nutritional factors and patient education)
2. Diagnose and stage pressure ulcers
3. Document the description of a typical wound using recognized wound-care terminology
4. Assess the condition of the wound bed for tissue debris, infection and moisture balance
5. Demonstrate the appropriate use of wound-care products to promote the healing of pressure ulcers (knowledge and skill)
6. Recognize the importance of treating the whole patient, not just the wound

to maximize interest and thus learning potential. An outline of the seminar content is provided in Table 3.

Our educational program was both repetitive and multifaceted. It included seminars, hands-on workshops, hardcopy educational material on all clinical units and the hospital intranet, and distribution of enablers to all clinical staff.

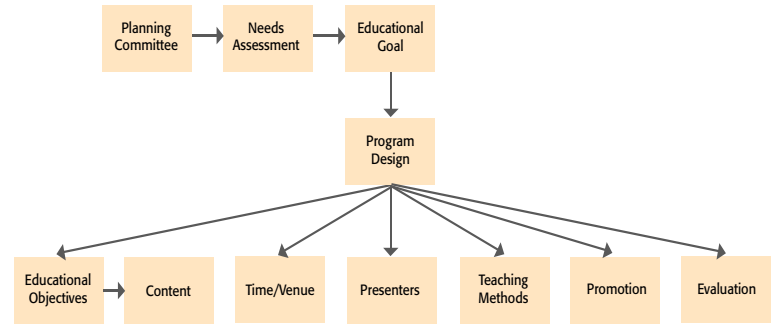
Results

As previously mentioned, our initial education program consisted of four identical, one-hour, interactive PowerPoint presentations. Each session began with a pre-test and finished with a post-test and seminar evaluation. Attendance was taken at each seminar. A total of 77 staff attended the presentations (approximately 60 per cent of eligible staff). The pre- and post-tests were identical, and the data collected gave us a rough measure of information learned by the participants during the presentation. The average pre-test score was 48.3 per cent, and the average post-test score was 66.3 per cent. Note that this did not give us data about information retention (beyond the hour) or whether information learned was translated into improved clinical practice.

With respect to seminar evaluations, 39 per cent of respondents felt the presentations were excellent, 53 per cent felt they were good, and eight per cent believed them to be average in quality. When asked what could be done to make the seminars more effective, the most common response was a request to make the sessions more interactive and show more practical examples.

The initial point-prevalence study of facility-acquired pressure ulcers was performed in our hospital before the start of the project and reported a rate of 14.2 per cent. The second point-prevalence study, done 11 months into the program, reported a modest reduction, with a rate of 13 per cent. The final point-prevalence study, done 19 months into the program, reported a substantial 36 per cent reduction in pressure ulcer prevalence (from the start of the program) with a rate of nine per cent. (It should be noted that, although National Pressure Ulcer Advisory Panel guidelines for pressure ulcer staging were used, data collection in each study was completed by different assessors.)

FIGURE 1



Educational program design.

Discussion

To plan an effective education program a number of steps are required, as well as sufficient time to complete the project. Often several months are necessary for proper program development.[2] The schematic in Figure 1 outlines an example of how an effective program can be created.

Adult learning principles

On acceptance of this project, I believed its focus would be on the fundamental concepts of AWC. In fact, this was only partially true. On further reflection it became clear that in order to implement this program effectively, we

TABLE 3

Outline of wound-care seminar

1. Program outline (agenda)
2. Program objectives
3. An introduction to the terms "best practice" and "advanced wound care"
4. Pressure ulcer overview (pathophysiology, anatomic locations and ulcer staging)
5. Pressure ulcer prevention using pressure off-loading techniques
6. Local wound care (TIM)
7. Wound-dressing principles based on function and absorptive capacity
8. Proper wound description based on a modified "MEASURE" tool
9. Pain management principles
10. Nutritional issues in wound healing

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TABLE 4

The six *Rs* of adult learning

Responsibility	■ Adult learners are self-directed and take responsibility for their learning.
Respect	■ Adult learners participate in diagnosing their educational needs. ■ They provide a wealth of experience to enhance learning. ■ They require a safe learning environment (intellectual, emotional, and physical).
Relevance	■ Adult learners have to "buy-in" for effective learning to occur. ■ They are interested in knowledge and skills required to perform evolving life tasks or to cope better with problems. ■ Learning orientation is problem-centred (relevance is easier to grasp).
Reward	■ The prime motivator is the application of knowledge/skills to solve an immediate problem. ■ Motivators are usually internal: self-esteem, achievement, need to know and curiosity.
Reciprocal learning	■ Effective learning involves a two-way flow of information. ■ Learning is enhanced and memory retention improved through the use of interactive learning techniques.
Reflection	■ Adults learn best through reflecting on experiences.

needed to develop an understanding of adult learning theory and be able to relate it to health professionals. Adult learning has evolved as a science over recent decades, and a number of principles are of value when planning an effective adult education program (Table 4).

When designing our education program, we tried to utilize many of these learning principles to enhance the educational experience for the audience. The learning needs assessment ensured the curriculum was relevant for all of the clinical disciplines invited. Each program began with an agenda outlining the organization of the presentation and a clear list of objectives outlining what we expected each participant to achieve by the end of the session. We encouraged comments and feedback that allowed participants to share their experiences and feel valued. Many interactive techniques were used, including case studies and audience participation.

Adult learning theory tells us that students are individuals and many learn best using alternative formats. Thus, we ensured our program was multifaceted and included seminars, hands-on workshops, hardcopy materials, enablers, Internet learning and one-to-one learning through the consultation service. The pre-test and post-test allowed us to gauge information learned and helped us to assess the validity of our educational process. Finally, participants evaluated the seminars to provide us with feedback to help us improve future educational sessions.

In our zealousness to cover as much information as possible in a one-hour seminar, I believe our desire for optimal interactivity suffered. This fact was mentioned in a number of evaluations, and it was suggested as an area for improvement in future sessions.

Responding to feedback

In response to this, two new seminars were held in January 2007. The same material (though less) was covered and the audience make-up was unchanged. The only difference was a greater focus on interactive techniques (Table 5).

continued on page 38

TABLE 5

Interactive techniques used in the January 2007 seminars

Stand up and be counted	The audience was asked demographic questions
Question and answer	A debridement quiz (three questions)
Case studies	A presentation case—an amputee with an ulcer on his one remaining leg
"Buzz groups"	Use of small groups to discuss the treatment of an unknown ulcer
Brainstorming	Listing and discussing audience treatment choices
Handouts	PowerPoint slides with spaces for notes were handed out before the seminar

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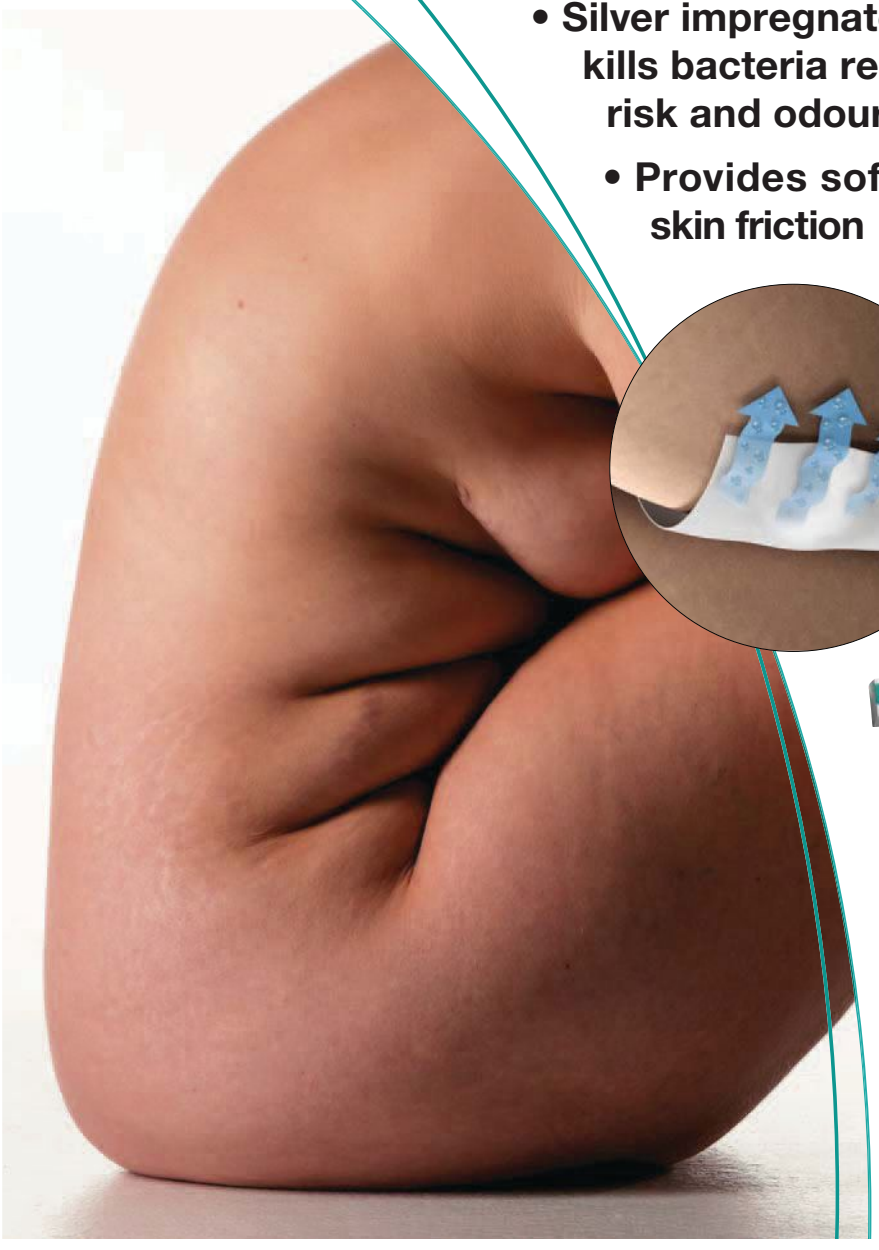

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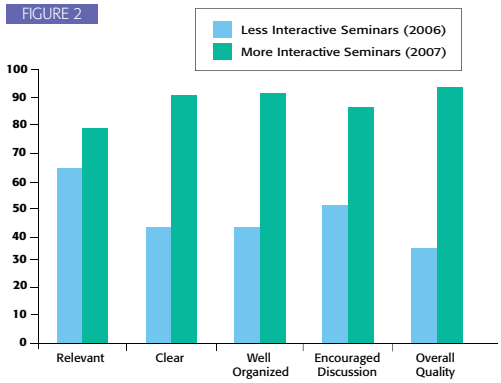
FIGURE 2



Comparison of evaluations between the April 2006 and January 2007 seminars. The graph shows the percentage of respondents that chose "strongly agree" or "exceeds expectations."

A total of 95 participants registered for these seminars. In comparing the evaluations for the two series of seminars (Figure 2), it is clear that audience satisfaction was higher for all measured criteria in the more interactive workshops in January 2007.

A review of educational strategies to enhance learning in the health professions by Sibbald et al. concluded that primary strategies (conferences and other forms of didactic learning) are passive forms of learning that are not very effective in promoting retained knowledge or improving clinical practice. Furthermore, they found that secondary strategies (also known as enablers or reinforcers) promoted interactivity and resulted in significantly higher knowledge retention.[3]

After a thoughtful review of what we set out to accomplish and the goals achieved, a number of final comments can be made (Table 6). We designed and implemented this model with the intention of establishing best practices in wound care in our hospital. With a significant reduction in pressure ulcer prevalence within two years of instituting our program, we believe our program has merit and are optimistic that we will become known as a centre of excellence in wound care.

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TABLE 6

Take-home messages

- The introduction of an advanced wound-care program can only be successful in an environment where hospital administration and clinical management are supportive.
- A well thought-out and organized implementation plan is mandatory for establishing a successful education program.
- Wound-care education is an ongoing process, and learning is best achieved when attention is paid to adult learning principles.
- Advanced wound care is an interprofessional specialty, and patient outcomes are improved when a team approach is used.
- The wound-care practitioner has an obligation to pass on new knowledge and skills to other members of the wound-care community.

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CAWC's Pressure Ulcer Awareness and Prevention (PUAP) Program:

How a Big Idea is Changing Practice

Update 2009

BY Kimberly Stevenson

The main goal of the Pressure Ulcer Awareness and Prevention (PUAP) Program is to create a shift in emphasis from *treating* pressure ulcers to *preventing* them. The PUAP program provides facilities with the necessary tools to transfer knowledge related to pressure ulcers to the bedside so that facilities can *act* on what they *know* to be best practice. As of January 2009, 45 individual facilities across Canada were implementing the PUAP program. Participating provinces include Alberta, Ontario and Nova Scotia. We are also excited to have brought on board our first international hospital, in Alaska.

As the PUAP National Team Leader and Program Manager, I'd like to share how, since the official offering of the PUAP program began, practice is changing at the bedside and facilities are achieving success in stamping out preventable pressure ulcers. So, how are we measuring up?

Quantitative Results

Now that most facilities have been in the program long enough to submit the first annual prevalence and incidence (P&I) data, the CAWC would like to share how effective the PUAP program has been to date in participating facilities across Canada. Prerequisites of the program include the collection of pre-program baseline P&I data and annual collection thereafter. The PUAP program has outlined a standard for how P&I data are to be collected in all facilities to ensure standardization and accuracy.

Currently, 21 facilities have submitted their data for our analysis. Taking the results of all 21 facilities together, the prevalence of pressure ulcers has been reduced from 12.3 to 8.8 per cent, representing a 28 per cent reduction (Figure 1). Incidence has dropped from 4.6 to 2.9 per cent, representing a 36 per cent reduction (Figure 2). The 95 per cent confidence intervals for prevalence and incidence are shown in

Background

In 2006, the Canadian Association of Wound Care (CAWC) designed and piloted a Pressure Ulcer Awareness and Prevention (PUAP) Program. The PUAP initiative was formed in response to a 2004 study by Woodbury and Houghton, in which the authors reported a national pressure ulcer prevalence rate of 26 per cent[1]; a number that demonstrated a big problem. Woodbury and Houghton's findings meant that one in four people in health-care settings across Canada experience a pressure ulcer. This prevalence rate is unacceptable when we know up to 70 per cent of pressure ulcers can be prevented.

The CAWC took action, and the PUAP program was developed. Six facilities—three long-term care, two acute care, and one outpatient care—participated in a pilot study in 2006–2007. The results indicated a reduction in the prevalence of pressure ulcers of seven per cent to 57 per cent in five of the six facilities. Only two facilities reported incidence rates, which indicated reductions of 71 and 56 per cent. Detailed information about the pilot project and its results have been reported elsewhere.[2] Following the success of the pilot program, the PUAP program was made available to facilities across Canada in the spring of 2007.

Kimberly Stevenson, RN, BN (IIWCC), is the National Team Leader and Program Manager of the Pressure Ulcer Awareness and Prevention Program, CAWC.

Figures 1 and 2, respectively. In both instances, the confidence intervals do not overlap from baseline to the annual reassessment, indicating that the changes are statistically significant.

The implications of these results are stunning. In the case of these 21 facilities, the numbers may indicate that increased awareness and changes in care affected the prevalence such that 100 fewer people had an ulcer at the time of the year-end assessment, a clear reduction in patient/resident suffering, caregiver workload and costs for care and materials.

Qualitative Results

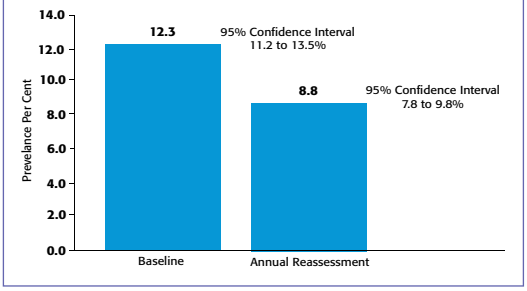
The success of a program is measured by more than just numbers. Qualitative information on the effectiveness of the program has been collected via "site champion" teleconference calls and progress reports. The most common feedback I receive is on how the program has affected practice including the following:

- improved communication between regulated and unregulated staff
- better recognition and increased reporting of red and discoloured skin and Stage I pressure ulcers
- reduction in the frequency and worsening of Stage II, III, IV and unstageable pressure ulcers
- frontline staff feel more empowered; they now know how to make a difference at the bedside

To provide you with a little more insight on how the program is influencing changes in practice, the following sample of direct quotes from site champion progress reports demonstrates how the PUAP program has made an impact within individual facilities.

- "There is increased awareness of pressure ulcers, especially with our health-care aides. Staff are more proactive with reporting of Stage I pressure ulcers and implementing interventions."
- "Families are very interested and think the PUAP is a great program."
- "Resident care plans have been enhanced, as we now note the specific risk and the plan of action to manage the identified risk."
- "[Personal support workers/health-care assistants] are also empowered to not only verbally tell the registered staff of concerns, but to put in a wound-care referral as well."

FIGURE 1

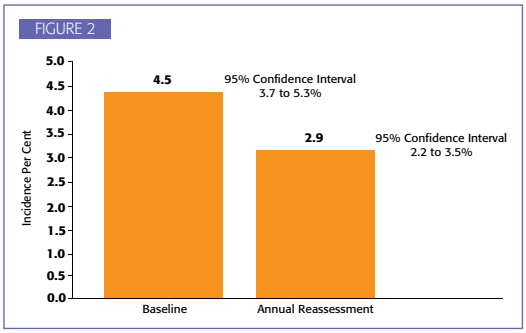


Prevalence of pressure ulcers in 21 facilities at baseline and first annual reassessment.

- "More involvement of physiotherapist/occupational therapist."
- "No more rubbing red spots—a new change in practice."
- "The program has empowered frontline staff to take a key role in the prevention of skin breakdown."
- "There is a 45 per cent decrease in prevalence of pressure ulcers since the implementation of the program."
- "High-risk cards have increased communication to [the] dietitian about who is at risk, better communication overall."
- "Monthly skin and wound statistics suggest that more pressure ulcers are identified earlier (i.e., Stage I or II) and/or being healed earlier or not progressing to later stages."
- "A reduction of 50 per cent in high-intensity-needs wound-care products required to manage ulcers."
- "A decrease in severity of ulcers—reduction of Stage III, IV, and unstageable ulcers."

With enhanced communication and an improved interprofessional team approach to pressure ulcer prevention, some facilities have also worked hard at going the extra mile to involve frontline staff and reward them for positive changes in practice. One example is where

FIGURE 2



Incidence of pressure ulcers in 21 facilities at baseline and first annual reassessment.

TABLE 1

The winning testimonial at a PUAP Recognition and Celebration Day

Written by Lester Braithwaite, PSW, Drs. Paul and John Rekai Centres, Wellesley Central Place, Toronto.

Normally the colour **RED** is associated with happy things like Christmas, Valentine's Day, a good bottle of wine, and roses—to name a few. However, in long-term care **RED** means **Stop, Look Out, Danger Ahead!** Reddened skin has become the focal point for caregivers, as this has been identified as the single greatest indicator of something going wrong in the life of the resident. Recently we have learned through PUAP that getting the **RED** out means more than turning a resident every two hours. Just as important as that, we need to look at the resident holistically. Some of the questions we are now asking ourselves include the following:

- Is the resident incontinent?
- Is the resident dry?
- Is the resident appropriately hydrated and getting adequate nourishment?
- Is the resident toileted adequately?
- Is the resident wearing appropriate and proper-fitting clothing?
- Is the resident agitated or in pain?

Suddenly we realize that these are the same questions that we would want asked on our behalf if we were in the resident's situation.

So from now on, we are getting the lead out to get the RED out!

frontline staff had the opportunity to submit staff testimonials about how they felt about the PUAP program as part of a PUAP Program Recognition and Celebration Day. The author of the winning testimonial (Table 1) was provided with a gift basket, and the PUAP program team was even rewarded with PUAP team T-shirts!

Creating a positive-feedback cycle where site champions recognize the positive practice changes of staff efforts has proven to be an effective motivating tool. It has also instilled a general sense of pride among staff, further enhancing their commitment to preventing pressure ulcers. Overall, the PUAP program has positively influenced the practices of facilities using the program and, as with all cultural changes in an organization, more is yet to be gained and improved upon as facilities continue to enhance the quality of care they provide through their three-year commitment and beyond.

Next Steps: The Pressure-free Zone

The results we have to date clearly demonstrate that the PUAP program is effective at reducing the prevalence and incidence of pressure ulcers. As with all projects, growth and improvement continue, and we have now recognized an even better way to address the problem of pressure ulcers within the health-care system. A new emphasis will be placed on encouraging health regions and districts to consider tackling the problem through "Pressure-free Zones."

The Pressure-free Zone concept looks at incorporating all facilities and health-care offices in a geographic area to address the reality of patients/residents who transfer between sectors of care (acute care, home care and long-term care) and how the patient's/resident's risk for developing a pressure ulcer is addressed and managed. This approach is valuable because we can easily see how all the efforts made by health-care workers in one sector of care are in vain if all of the facilities in the continuum of care are not working together on prevention.

It is simply not enough to have one facility in a large city or health district/region focusing on preventing pressure ulcers. We need to consider how patients/residents move through the system and ensure that all of the health-care providers they meet along the way address their risk for pressure ulcer development with the same knowledge, practices and consistency. Is your region/city/district up to the challenge? Will you be part of Canada's first Pressure-free Zone? We're ready…are you?

If you would like more information on the PUAP program please do not hesitate to contact me at (250) 764-6283 or by e-mail at stevenson@preventpressureulcers.ca. You can also explore our Web site at www.preventpressureulcers.ca.

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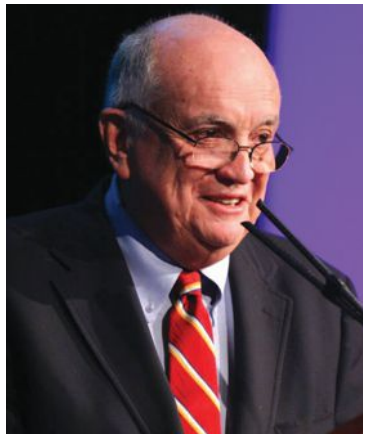
An Interview with **Dr. I. Kelman Cohen**

A Wound Healing Leader:

A Lifetime Journey to Determine How Wound Healing Works



Dr. I. Kelman Cohen

INTERVIEW BY Catherine Harley, Associate Editor, *Wound Care Canada*

Dr. I. Kelman Cohen, MD, is Professor and Chairman Emeritus, Division of Plastic and Reconstructive Surgery, Medical College of Virginia, Virginia Commonwealth University in Richmond, Virginia, and President of Tissue Technologies Holding LLC. He is a founder of the Wound Healing Society (WHS) and winner of a 2008 World Union of Wound Healing Societies Lifetime Achievement Award.

Q What led you to become a plastic surgeon with an academic research focus on wound healing?

In the early '60s, when I graduated from the University of North Carolina School of Medicine, I knew that I wanted to be a surgeon. I chose plastic surgery because it was the most diverse and challenging field of surgery that I could find. I then became extremely interested in wound healing because the problems were so severe and few people in health care were at all interested in solving the problems. At that time there was very little focus on molecular mechanisms of wound healing in general and chronic wounds in particular. Patients with chronic wounds were a huge challenge. There was an almost emergency need to figure out why wounds became and remained chronic. I felt that I could make an impact on this space. Therefore, after I completed a plastic surgery fellowship at the Johns Hopkins Hospital in Baltimore, Maryland, I spent two years working at the National Institutes of Health (NIH), where I developed the proper basic science skills to carry out the wound-healing research I felt was so important.

Q How did you become the Chief of Plastic Surgery at Virginia Commonwealth University?

There was no plastic surgery at the university and they realized their need for it. Because of my background in research combined with my excellent clinical training, I was hired for the position. It was frightening to jump into a chairmanship at a very young age, but the opportunity was one I could not turn down. It allowed me to establish my own division of plastic surgery rather than going to work for someone else.

Q How was your plastic surgery department set up?

The Division of Plastic Surgery was set up with a strong focus on both clinical plastic and reconstructive surgery and wound-healing research. I was able to bring a superb clinical teacher of plastic surgery with me as well as a full-time PhD for the lab. Soon we had grown to six clinically oriented plastic surgeons. In addition, several of the plastic and general surgical residents clamoured to join the lab for at least two years. Nurses played a major role in making both the clinical and research areas work properly. In all of the sub-specialties in plastic surgery, there was a nurse assigned who was responsible for the day-to-day operations of the functional area.

Q Tell us about the first-ever wound-healing centre in the United States that you established and how you connected it with an active research program.

This Wound Healing Center, which was part of the Virginia Commonwealth University, was started in 1982. Mary Crossland was a young, experienced nurse with an ICU background who worked with me to get the clinical wound-healing program started. Mary played a key role because she was a good organizer who quickly grasped the challenges of patients with wounds.

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She also recognized the importance of translational research. I could never have done it without her. She managed the day-to-day clinical wound care. We saw a variety of wounds such as diabetic, venous and pressure ulcers. We were also a referral base for the area and often had some very obscure, complex wounds on patients who required assessment and diagnosis as well as treatment plans.

The PhDs from the Division of Plastic Surgery research program also spent time in the wound clinic so that they could relate the lab research projects directly to the patients and the tremendous difficulties they had with their wounds. We had started an active translational research program between the wound-healing lab and the clinical wound-healing centre. If we were going to improve the treatment of these wounds, we needed to learn what was making them abnormal biochemically so we could proceed with a logical form of treatment. There were no institutional review boards (IRBs) when we first started, which made it easier to get studies going. Now IRBs are standard when doing research—and these are important safeguards. We truly had a "bedside to bench" research process.

In the '70s, there were many biological phenomena that we did not have the technical ability to probe in the lab. In the '70s and '80s we couldn't measure many of the molecular events of normal and abnormal healing. Today, there are new and innovative laboratory tools to measure what is really happening to alter healing. This allows us great opportunities to develop interventions to help the patient. Instead of taking our ideas from the bedside to the bench, we are now creating new treatments by going from the bench to the bedside with new products to treat our patients in a much better way.

Q What is your philosophy about the role of nurses in the wound-healing clinic?

Nurses specialized in wound healing are essential to the success of a wound-healing clinic. It was very clear to me that skilled nurses understand that you must treat the entire patient and their diseases and make informed decisions about what care plan should be implemented. Nurses are the key. They are very important in identifying problems and making sure that the problems are dealt with using a multidisciplinary approach.

Q How did you get started in wound-healing research?

I ended up doing two years of wound-healing research at the NIH in Bethesda, Maryland. I felt that although I had gained clinical experience, if I did not do that research I would not understand enough to make an impact to advance wound healing. I realized that the only way I could make an impact in wound care was to understand what was going on at a molecular level. I had to get involved with the science of wounds so that I could understand collagen metabolism and proteases, which were just being looked at. I learned how to run assays so I could test various human wound tissues. Industry was not as involved in wound-healing research at that time, and we did not know what we know today about non-healing wounds. Understanding the wound is what made the difference for me.

Q What type of research related to wound care have you been involved in?

First I was involved in understanding biochemical events of normal wound healing and then defining the molecular events that make the chronic wound actually chronic. We were in one of two research centres in the world that researched elevated MMPs [matrix metalloproteinases] and elastase in chronic wounds and looked at other mechanisms involved. In the late '90s we teamed up with the Department of Agriculture with a method that can remove proteases from the wound. We have also looked at how to detect proteases at the bedside (point-of-care detection devices) so that the appropriate treatment can be used on chronic wounds.

Q Tell me about the team at your wound-healing research laboratory in Richmond.

The wound-healing research laboratory that I am currently involved with is located adjacent to the Medical School. It has an active lab, which does contract research, but it has also received federal funding from NIH grants. Our objective is to discover new and innovative methods for healing wounds and detection devices of abnormal healing, which will help the clinician make better treatment decisions in wound management. The lab staff includes a material scientist and a molecular biologist as well as lab technicians.

Q How do you obtain funding for research projects?

The most common way for basic research in wound healing is through NIH grants. They have an attractive program to develop small businesses called SBIR [Small Business Innovation Research] and STTR [Small Business Technology Transfer] grants.

Q What are some of the biggest obstacles that you encounter in the research setting?

[The biggest obstacles are] political, as far as being able to have the freedom to do what you want to do in order to make a

continued on page 48

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See article on page 56 to learn more. · Pour en savoir plus, voir l'article à la page 56.

difference. This is also tied up with lack of funds to support research efforts.

There can also be a problem when business does not listen to good science. They are tied together.

Q Can you tell us about the textbook that you edited, *Wound Healing: Biochemical and Clinical Aspects*. What was the catalyst behind becoming involved with this book?

I felt that there was nothing out there that allowed you to see a huge panorama of wound healing and where there were challenges that needed solutions. This was before computers, and a textbook was needed in order to obtain information. My dream is to develop an online version of this book that is updated and that can continually evolve as new research is available.

Q Who would you consider to be your greatest mentor(s) in wound care?

Earle E. Peacock Jr, Professor/Chairman of Plastic Surgery at the University of North Carolina at Chapel Hill, one of the wound-healing pioneers doing work inhibiting scar formation when I was a resident. He was an objective and dynamic teacher. When I came to him with my wound-healing thoughts he was very supportive.

George Martin, PhD, who was at the NIH and later worked for a wound-healing company, is also a mentor. George is the world's guru on connective tissue metabolism and contributed science to what we know today on wound healing. He was a teacher and a mentor.

Q What contribution that you have made to wound healing are you the most satisfied with?

The recognition I receive from people that I have trained is my greatest reward. There are people that I have mentored and trained all over the world who have been able to carry on and teach and influence others. I am glad I have been able to inspire people to go forward and instill a passion for wound healing.

Q How did you get involved in starting the WHS?

The WHS was started 20 years ago. I started to develop a wound-healing foundation in order to manage funds that could be directed toward wound-healing research. We developed some documents to initiate the set-up of a wound-healing foundation, and from there we decided to set up the WHS. We got a business individual to assist us with the operations of the WHS and then we became formally established as a society.

Dr. Tom Hunt was the first president, and we rotated the president between an MD and PhD every other year. We started a journal (*Wound Repair and Regeneration*) and ran the whole WHS out of my Richmond office for the first five or six years. The WHS is still running over 20 years later, and the journal is known around the world. There are also nurses involved who have a scientific orientation. Two years ago, the WHS joined with the annual SAWC [Symposium on Advanced Wound Care] conference with great success.

Q What areas of wound-healing research do you think we should be spending more time and money on? What does the future hold?

The great light at the end of the tunnel will be tissue regeneration. If lower forms of life can do it then there is a possibility of this in humans. Before we get there, I think that the most exciting area is developing an artificial matrix that will replace tissue and be viable—like blood vessels and skin, for example. That could make chronic wounds obsolete.

If you look at where science is now compared to where it was 50 years ago, you'll see that research is progressing at a logarithmic versus a snail's pace. Teams of experts in the wound-healing field need to work together in order to continue to progress wound healing.

Q In what area has your most significant learning experience been in wound healing—clinical or research?

The caring and compassion of nurses and physicians for the patient as a whole will always be a huge part of the wound-healing equation—no matter how far science goes. There is nothing greater than human touch, which must turn on factors in the brain that improve healing. We just aren't smart enough yet to understand all of these pathways triggered by emotions.

Q Any words of wisdom from a wound-healing leader?

Wound healing is understanding and being objective. Don't be complacent. Never stop questioning. Don't believe everything that you hear and always strive to understand the processes. Only through gaining an understanding of how things work will we be able to advance wound healing.

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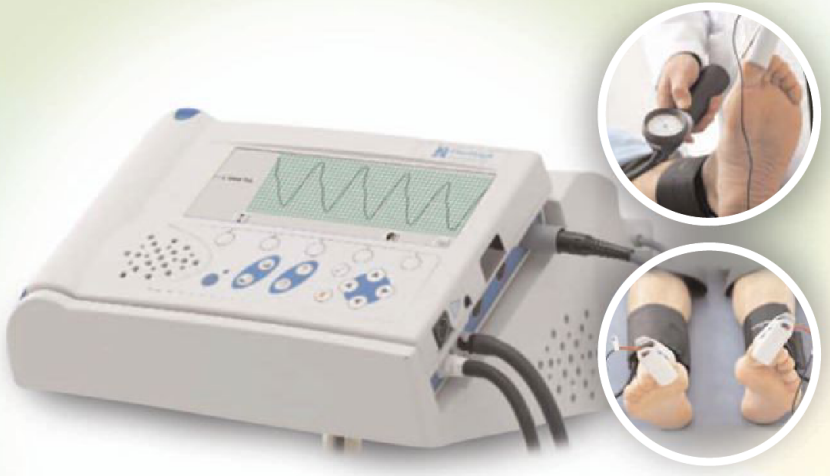

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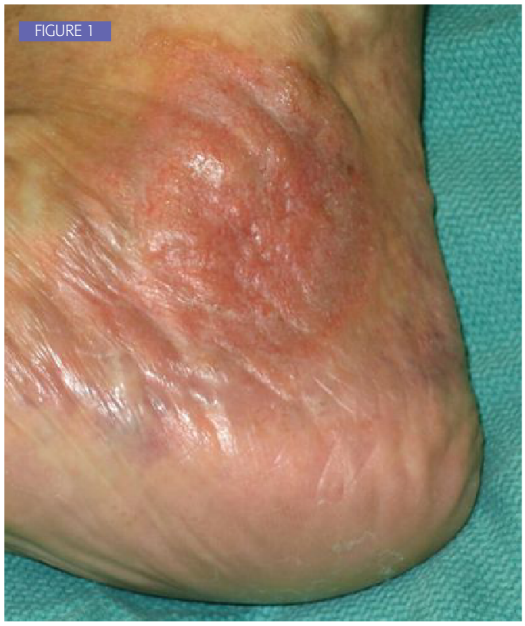
Puzzling Cases: Wound Sleuth

BY Rob Miller

A 65-year-old female has had a previous venous stasis ulcer over the ankle region. With proper wound care the ulcer has healed, but her main complaint is now of pruritus in the affected area.

FIGURE 1



Question: What does one see clinically?

Answer: The ulcer itself has healed, but the patient has an eczematous (dermatitic) patch over and around the area of previous ulceration. The skin is inflamed, red, swollen and oozing as a result of the dermatitis. This is called stasis eczema (dermatitis).

Question: What is the treatment?

Answer: The mainstay of treatment for stasis dermatitis is topical steroids. Steroids come in a variety of different strengths from the very weak (e.g., hydrocortisone) to those of mild, moderate and high potency. Although hydrocortisone does not have any side effects (skin atrophy in particular), it is also not all that effective—in my experience—in controlling dermatitis or pruritus.

One to two months of using a steroid of a higher potency (e.g., betamethasone valerate) will frequently control the itch and resolve the dermatitis. It can be applied at nighttime after the patient's support stockings have been removed, as well as first thing in the morning. Once the dermatitis has resolved, the stronger steroid can be substituted with one of weaker potency (e.g., hydrocortisone) or a moisturizing cream to prevent recurrence. Continued long-term use of compression stockings is also necessary to help prevent recurrence of the ulcer.

Rob Miller, MD, FRCPC, has been practising dermatology for the past 20 years. He worked as a general practitioner in Ontario, British Columbia and South America before pursuing his studies in dermatology at McGill University in Montreal, QC. He is currently Associate Professor of Medicine at Dalhousie University and Co-director of the Chronic Wound Care Clinic at the QEII Hospital in Halifax, NS.

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1. The Use of MEDIHONEY™ on surgical wounds post-CABG. Bateman S, Graham T (2007) WOUNDS UK. Vol 3. 76 – 83.
2. Leptospermum scoparium Honey vs. Hydrogel to deslough venous ulcers: A randomised controlled trial. Gethin G. EWMA 2007.
3. Chronic lower extremity venous ulceration – Use of a Leptospermum honey impregnated alginate to facilitate wound closure. Regulski M. SAWC 2008.
4. Wound care with MEDIHONEY™ in paediatric haematology-oncology. Simon A, Sofka K, Wiszniewsky G, Blaser G, Bode U, Fleischhack G. (2006) Supportive Care in Cancer. 14. (1): 91-7.

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Greetings from CAWC President Cathy Burrows

BY Cathy Burrows

I would like to extend wishes to you for a healthy and successful 2009. This year promises to be the most exciting and productive year to date in the history of the CAWC. As President, I am pleased to report on the activity and hard work of the CAWC Board of Directors and staff to improve wound care both nationally and globally.

Looking Forward Through 2009

In 2009 you will see the launch of a new and dynamic Web site and the opening of the CAWC Foundation, which will support research and future initiatives of the CAWC.

The success of the Pressure Ulcer Awareness and Prevention Program continues, and our first international program is now up and running in Alaska. The Pressure-free Zone initiative, which bridges pressure ulcer prevention between acute and long-term care, is an idea that is sure to improve pressure ulcer prevention across all sectors. See Program Manager Kimberly Stevenson's article on page 40 for more information on this innovative project.

Our educational programs continue to get better and will be going high-tech in 2009. In an effort to better serve our membership, we will be offering an expanded S1 program online, which will in turn allow the current S2 program to be delivered as a full two days of hands-on skills labs. The most exciting news is that our online educational programs are being designed to prepare our membership for future certification. You can read more on our online initiative in "Education at the CAWC" on page 58.

Last year, in an effort to better serve our francophone population, we established a French-language Task Force. The Task Force brought forward a number of great ideas that we have begun implementing already and that you'll see more of in 2009.

The World Needs More Canada

Our international initiatives, which continue to expand, include three important projects in 2009.

The North American Wound Care Council meeting is being held in Mexico this year as part of the inaugural meeting of the Mexican Wound Care Society. The support the CAWC has given to our Mexican partners has been an essential component of the birth of the Mexican society and their ability to produce their own meeting.

At the January Board meeting, approval was given to formalize the involvement of CAWC members in the American Association of Wound Care (AAWC) Global Alliance initiative. Only CAWC or AAWC members are eligible to take part. See "Join the CAWC and see the world!" on page 54 for details on this very exciting program.

In 2008, CAWC past president David Keast was partially sponsored to attend the World Health Organization meeting in Geneva, Switzerland, on best practices for lymphedema management. This initiative continues to grow globally and you will be kept apprised of future work.

Code of Ethics

The CAWC believes in promoting a code of ethics in all areas of wound-care education. This involves conference speakers, our industry partners and consumers of wound-care education. The "Ethics in Education: Update" piece on page 58 outlines the tenets of the code of ethics and presents our strategy for implementation of the code.

As you can see, we take our responsibilities seriously and have been working very hard on your behalf.

Cathy Burrows, RN, BScN, MScCH
President, Canadian Association of Wound Care.

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Canadian Association of Wound Care News

CAWC Scholarships

Even in these tough economic times, financial support is available through the CAWC and our corporate partners to help you achieve your goals. Through the CAWC you have access to scholarships that are aimed at advancing wound-care education in Canada. The CAWC currently offers nine educational scholarships and two research scholarships, valued at $2,500 each. These scholarships serve to support educational and research initiatives that promote best practices and improve patient care.

In order to apply, you must have been a CAWC member for at least one year. (If you are not already a member, this is another good reason to join today!) We look forward to helping you help yourself and the wound-care community in Canada. For more information and to apply, please visit the CAWC Web site at www.cawc.net.

The CAWC is proud to announce the recipients of the 2008 scholarships:

- The Dr. Warren L. Rottman Education Scholarship sponsored by 3M Canada Inc.: Rebecca Rose Cottrill
- The Mölnlycke Health Care Educational Scholarship sponsored by Mölnlycke Health Care: Kevin Woo
- The Elise Sørensen RN Memorial Scholarship sponsored by Coloplast: Michele Geach
- The T.J. Smith Global Wound Academy Award sponsored by Smith & Nephew: Nicole Lindsay Thompson
- The ConvaTec Scholarship for Advancing Wound-care Education sponsored by ConvaTec: Elizabeth Lukinuk

2008 Theme Meetings

As you know from previous issues, 2008 saw the CAWC substitute two "Theme Meetings" for its annual conference to accommodate the World Union of Wound Healing Societies event. As we had hoped, the Theme Meeting format generated new and exciting possibilities for the delivery of on-site education. The CAWC would like to thank everyone who attended the fall 2008 Theme Meetings in Victoria and Halifax, especially those who responded to our survey request. We received extensive positive feedback from participants regarding our new format and will be incorporating its best elements into all future conferences.

Join the CAWC and See the World!

An exciting new international opportunity is now available for CAWC members.

The CAWC is pleased to announce an exciting new benefit for all of our valued members. CAWC members are now eligible to participate in an innovative program offered by our sister organization in the U.S., the Association for the Advancement of Wound Care (AAWC). The program is called the AAWC Global Alliance. Through partnership with Health Volunteers Overseas (HVO), the program is aimed at bringing wound care to developing nations. The AAWC Global Alliance and HVO provide opportunities for teams of medical professionals to volunteer in underprivileged countries. All arrangements are handled to ensure that volunteers enjoy a safe and fulfilling experience.

You must be a CAWC member to apply and, if you are accepted, you must become a member of the AAWC, which costs USD $145 annually. All other costs are the responsibility of the applicant. To show our support for your volunteerism, we will cover the cost of your AAWC membership dues for the first year. This is your opportunity to join the CAWC and make a difference in the world! For more information, please visit the CAWC Web site at www.cawc.net or the AAWC Global Alliance Web site at www.aawconline.org/wound_care_alliance.shtml. To volunteer, please visit www.hvousa.org.

continued on page 56

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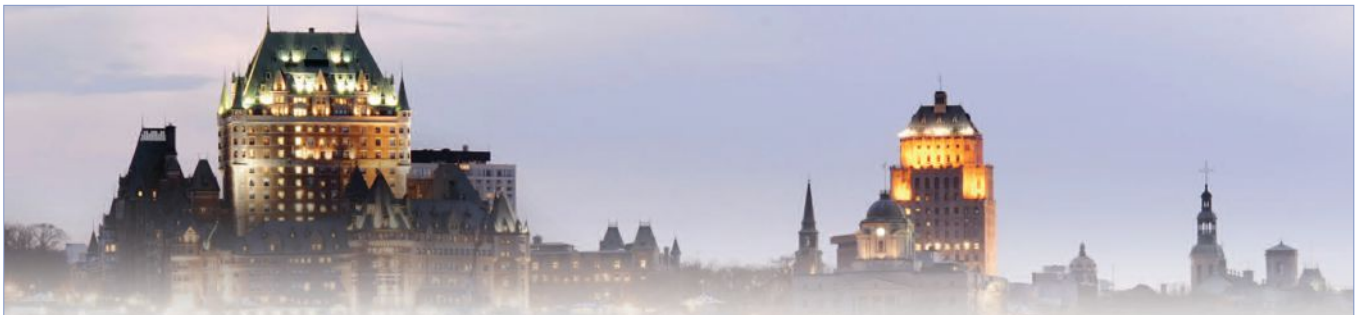

2009 Annual CAWC Conference—in Beautiful Quebec City!

The 15th Annual CAWC Conference is the must-attend educational wound-care event of the year. It will take place October 29–November 1, 2009 at the Centre des congrès de Québec in Canada's most European and historical location: Quebec City. The conference will be fully bilingual, with simultaneous translation for all sessions.

To ensure that we meet your needs, the conference program has been based on extensive needs assessments and feedback from clinicians at all levels of expertise and from all types of health-care settings across Canada. As a result, sessions covering the fundamentals of wound care will be offered alongside advanced topics, as well as unique streams such as the reality of wound care. There will be something for everyone!

As part of the CAWC's mandate to create an optimum learning environment, the conference program has been designed around a unique approach that will allow you to transfer what you learn at the conference into your daily practice. For best results, please BYOT (bring your own team)!

Why should you attend? First, you'll be treated to a range of exciting sessions with Canada's top speakers. Second, the conference will provide you with the year's most important opportunity for networking with other wound-care clinicians, industry representatives and top educators. It will also be the ideal place for wound-care professionals from all disciplines to share their research findings, ideas, questions, and solutions. In addition, the conference will feature the country's largest wound-care trade show, with over 40 exhibitors. On top of all this, there will be a great range of social events, including the president's masquerade party. All in all, this will be the biggest wound-care celebration of 2009!

If you're looking for the most important and comprehensive wound-care learning experience of the year—and want to do it in one of Canada's most beautiful cities—join us in Quebec! For more information and to register online, please visit the CAWC Web site at www.cawc.net.

Congrès annuel 2009 de l'ACSP – dans la merveilleuse ville de Québec!

Le 15e Congrès annuel de l'ACSP est l'événement éducatif en soins des plaies le plus attendu de l'année. Il se tiendra du 29 octobre au 1er novembre 2009 au Centre des congrès de Québec, dans cette ville la plus historique d'influence européenne du Canada. Le congrès sera entièrement bilingue avec une traduction simultanée pour toutes les sessions.

Pour s'assurer de rencontrer tous vos besoins, le programme du congrès a été élaboré selon les évaluations et rétrospectives des cliniciens d'expertise en soins des plaies et d'intervenants du domaine à travers le Canada. Par conséquent, des sessions sur les principes fondamentaux comme sur les soins avancés seront présentées pour représenter le mieux possible la réalité du soin des plaies. Il y en aura pour tous les goûts!

Ayant pour mandat de créer un environnement optimal pour l'éducation, l'ACSP propose un programme conçu selon une approche unique qui vous permet de transférer les connaissances acquises au congrès dans votre pratique quotidienne. Pour de meilleurs résultats, amenez votre équipe!

Pourquoi devriez-vous y participer ? Premièrement, vous assisterez à des sessions préparées par des conférenciers de haut niveau du Canada. Deuxièment, le congrès vous permet la meilleure opportunité de l'année dans le développement d'un réseau de contacts avec des cliniciens en soins des plaies, des représentants de l'industrie des soins de plaies ainsi que des formateurs qualifiés. C'est aussi le meilleur endroit pour les professionnels de toute discipline en soins des plaies de partager les résultats de recherche, les idées, les questions et les solutions dans ce domaine. De plus, le congrès a la particularité de représenter le plus grand salon en matière de soins des plaies, avec plus de 40 exposants. Au-dessus de tout, c'est une opportunité d'évènement social important avec le bal masqué du président. En résumé, ce sera la plus grande célébration en soins des plaies de l'année 2009!

Si vous prévoyez participer à la plus importante expérience de l'année en soins des plaies et voulez le faire dans une des plus belles villes du Canada, joignez-vous à nous à Québec! Pour de plus amples informations ou pour vous inscrire en ligne, visitez le site Web de l'ACSP au www.cawc.net.

continued on page 58

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[1]*Meaume S, Téot L, Lazareth I, Martini J, Bohbot S. (2004). The importance of pain reduction through dressing selection in routine wound management: the MAPP study. J Wound Care, 13(10), 409-413.*

The CAWC Boutique: Providing Clinicians with Tools for Best Practice

The CAWC is pleased to introduce the Product Picker Dressing Selection Guide, which is now available in English and French and can be purchased from our online boutique. This enabler is a laminated poster that can be customized using solvent-free dry-erase markers. It allows clinicians to match wound characteristics to dressing characteristics, thus making product selection easier. To purchase this and other items, please visit the CAWC Web site at www.cawc.net.

Ethics in Education: Update

Over the past year, the CAWC has continued to refine its code of ethics for the delivery of wound-care education. The goal of this effort is to create discerning consumers of education, promote transparency related to the purchasing-education relationship and ensure that speakers at CAWC events are aware of their ethical obligations. The code is based on the following points:

- All educational presentations should be generic.
- All education must be evidence-based.
- References should be provided in on-screen presentations and complete references made available to all participants.
- Presentation content must conform to the tenets of best practice.
- Educational objectives must be stated at the beginning of presentations in slides and printed materials.
- All presentations should begin with a speaker declaration of conflicts of interest.
- Where educational initiatives are linked to buying protocols, this should be stated clearly in the introduction of all relevant presentations or printed materials.

For more information, please visit the CAWC Web site at www.cawc.net.

Education at the CAWC: Even More of What You're Looking For!

You've been telling us, and we've been listening! At the CAWC we've always been proud of our excellent large-scale learning events, such as our fall conference and spring S-Series. But we recognize that not everyone can take the time or commit the resources to participate in events of this type, and that some people are more comfortable in more intimate learning settings. We also know that governments, local health-care regions, and institutions have special educational needs that our expert faculty can fill. Therefore, we are pleased to announce that the CAWC is continuing to expand the variety of learning options for health-care professionals through 2009 and 2010. As always, all CAWC education will be evidence-based, developed by Canada's top skin- and wound-care faculty and informed by feedback we received from you.

Keep an eye on the CAWC Web site for more information on what's already in the pipeline and what's coming soon. Here are some examples:

- The 15th Annual Conference in Quebec City, October 28-November 1, 2009
- Changes to our enormously popular S-Series, beginning in 2010, with even more opportunity for hands-on learning.
- One-day events: Smaller, more intimate events with a focused agenda to suit specific regional or institutional needs, on an as-requested or pre-scheduled basis. If you're a decision-maker, talk to us about your specific needs.
- Comprehensive online education, to be launched in the fall. CAWC online education will be available "wherever you are, whenever you want"!

The CAWC has proven it's the place to look to comprehensive, evidence-based skin- and wound-management education, from novice to expert level. We focus on adult learning principles, non-biased and generic content, wonderful networking opportunities—and soon, with online learning, a chance to learn at your own pace!

Clinic Directory

If you're a regular reader of this section, you'll know that we've been asking clinicians across the country to submit information about their wound-care clinics so that we can create a national clinic directory. Many patients do not know where to turn when they have wounds so a clinic directory is an important tool for improving patient outcomes. In addition, the directory enables clinicians who do not specialize in wound care to refer patients in need. So far, we have 11 clinics listed. It's a good start, but we need to add more in order for the service to be truly useful. To view the clinic directory or to submit your clinic's information, please visit the CAWC Web site at www.cawc.net.

Have Your Say

From time to time, the CAWC sends e-mails asking wound-care clinicians to fill out surveys. These surveys help us track the needs of health-care professionals on a wide range of topics. Based on the results, we can structure our programs and products to serve you better. When you receive a request to complete a survey, please consider doing so. Your opinion matters!

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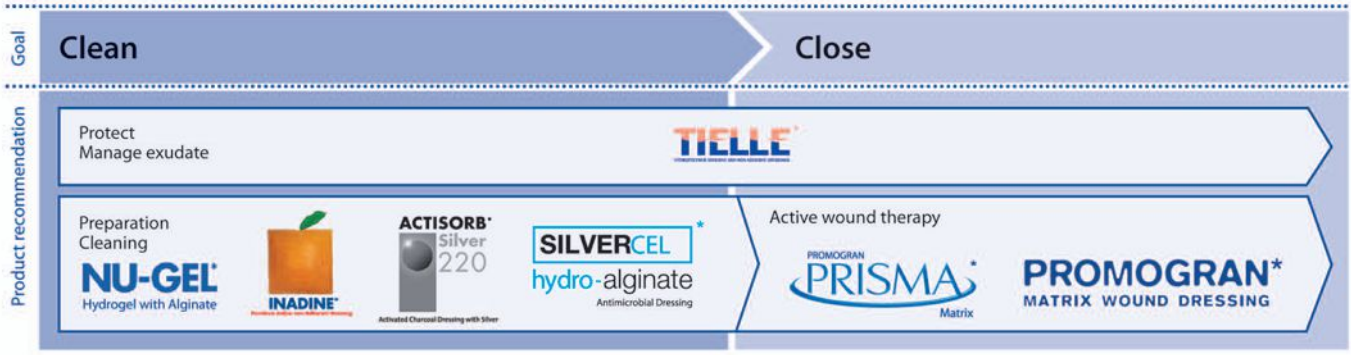

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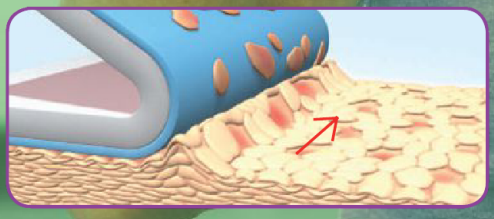

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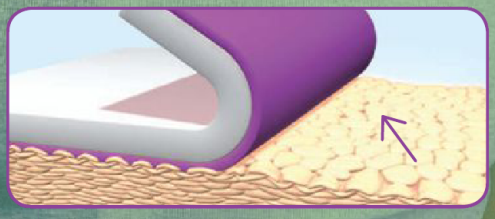

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