

Wound Care

C A N A D A

SUMMER 2020
VOL.18 NO.2



THE OFFICIAL PUBLICATION OF WOUNDS CANADA

**Two Wound
Sleuths
to Test Your
Knowledge**

**The Crisis in
Long-term Care**

**Incorporating
Harm
Reduction into
Your Practice**

**The Link Between
Diabetic Foot Ulcers
and Mental Health**

**Semmes-Weinstein
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*apart from dark necrosis 1. Múnter KC, Meaume S, Augustin M, Senet P, Kérihuel J.C. The reality of routine practice: a pooled data analysis on chronic wounds treated with TLC-NOSF wound dressings. J Wound Care. 2017 Feb; 26 (Sup2): S4-S15. Erratum in: J Wound Care. 2017 Mar 2; 26(3): 153. | 2. Edmonds M, Lázaro-Martínez JL, Alfayate-García JM, Martini J, Petit JM, Rayman G, Lobmann R, Uccioli L, Sauvadet A, Bohbot S, Kérihuel JC, Piaggese A. Sucrose octasulfate dressing versus control dressing in patients with neuroischaemic diabetic foot ulcers (Explorer): an international, multicentre, double-blind, randomised, controlled trial. Lancet Diabetes Endocrinol. 2018 Mar;6(3):186-196. | 3. Lázaro et al. Optimal wound closure of diabetic foot ulcers with early initiation of TLC-NOSF treatment: post-hoc analysis of Explorer.JWC VOL 28, NO 6, June 2019. | 4. Sigal ML, Addala A, Maillard H, Chahim M, Sala F, Blaise S, Dalac S, Meaume S, Bohbot S, Tumba C, Tacca O. Clinical evaluation of a new TLC-NOSF dressing with poly-absorbent fibers for the local management of exuding leg ulcers, at the different stages of the healing process: Results from two multicentric, single-arm, prospective, open-label clinical trials. J Wound Care 2019; 28(3) :164-175.

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Wounds Canada (www.woundscanada.ca) is a non-profit organization of health-care professionals, industry participants, patients and care partners dedicated to the advancement of wound prevention and care in Canada.

Wounds Canada was formed in 1995 as the Canadian Association of Wound Care. The association's efforts are focused on four key areas: education, research, advocacy and awareness, and partnerships.

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News in Wound Care

Wounds Canada News

COVID-19 Response

COVID-19: Caring for the Carers Webinar Series

Beginning in April, Wounds Canada presented a series of three webinars to give health-care professionals an opportunity to share their concerns, ask questions and support one another with coping strategies for living through a pandemic. For more information, see the article on page 8. These webinars are now available to watch on Wounds Canada's [webinar archive](#).

Care at Home Series

During the COVID-19 pandemic, many patients have been unable to access the care they need. The new Care at Home series is a set of resources for patients and their care partners trying to prevent or care for wounds at home. The first five resources are available now:

- Changing a Dressing
- Caring for Your Swollen Legs at Home
- Caring for Pressure Injuries at Home
- Diabetic Foot Complications: When is it an emergency?
- Caring for Your Feet: Safe Foot Care if You Have Diabetes



Wounds Canada's Response to the Canadian Armed Forces' Report on Their Experience in LTC During the Pandemic

The recent news about the Canadian Armed Forces' reports on long-term care homes reiterat-

ed the fact that wound prevention and care have been problems across Canada in all health-care settings for some time—a point that Wounds Canada and other organizations have repeatedly raised in the past with governments and other decision makers. Wounds Canada has contacted various levels of government and put forward a series of recommendations that could be implemented quickly to help Canadian long-term care homes. For more information about these efforts, see the article on page 18.

Wounds Canada Institute

Now is the time to continue your education online!

The Wounds Canada Institute can support your education needs from anywhere. Institute programs are cost-effective, flexible and developed

using adult learning principles for learners who want to improve their skin health and wound

care knowledge and skills. Programs cover a wide range of topics and have an interprofessional team approach. Browse through the list of programs [here](#) to discover which programs might be right for you.



New! Skin and Wound Care for Unregulated Care Providers – Online!

With the recent consciousness raising about situation in LTC facilities, there is now increased focus on the need for more

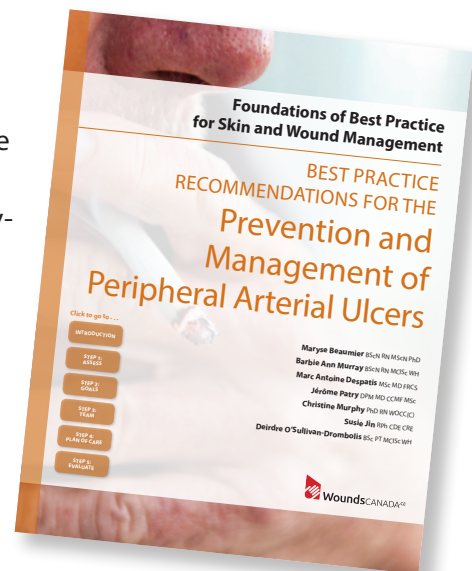


skilled and knowledgeable personnel. Are you a personal support worker, care aide or unregulated care provider? Now is the time to learn more about skin health and wound management with this new online program offered by the Wounds Canada Institute. You will learn about pressure injuries, diabetic peripheral neuropathy, moisture-associated skin damage, venous leg edema, and more! [Register here.](#)

Best Practice Recommendations

Best Practice Recommendations for the Prevention and Management of Peripheral Arterial Ulcers is now available. The recommenda-

tions in this article are based on the latest evidence, patient driven and intended to support the clinician and integrated team in the development and implementation of plans of care designed to optimize the prevention and management of arterial ulcers, and to minimize unnecessary limb loss.



DON'T MISS THIS!

Wounds Canada Fall 2020 Virtual Conference

Wounds Canada is pleased to announce that we are going virtual for our national conference this fall. Help us celebrate our 25th anniversary year with this exciting and innovative event, featuring engaging topics, expert speakers, opportunities for networking and more—all on an amazing virtual platform!

Attending a virtual conference gives you more flexibility: you can attend live, interactive sessions from anywhere, revisit archived sessions and completely eliminate travel and hotel expenses! It also gives Wounds Canada the opportunity to space out the learning over a longer period, giving you an opportunity to digest, review, reflect and apply what you learn. Stay tuned for information about how to register!

With a low registration fee in honour of our 25th anniversary, and access from anywhere with an Internet connection, this virtual conference is a great opportunity to bring together wound carers not just from Canada but from around the world. Please encourage your international colleagues to become part of this exciting event! [Click here](#) for more information.





News from Our Industry Partners

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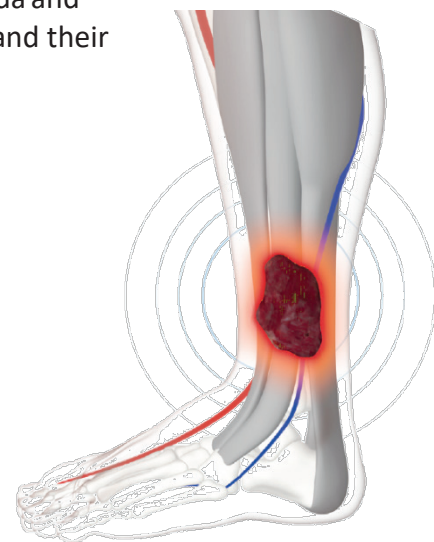
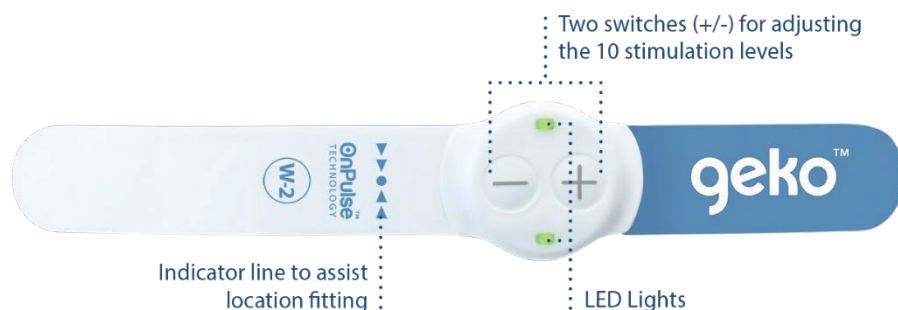
Intertrigo presents a challenge for both patients and health-care professionals. Patients are in pain and, if left untreated, this can lead to secondary infection. For health-care professionals, traditional treatments are messy and often ineffective because they only target one or two of the four causes (moisture, friction, bacteria, fungus). InterDry® with FourFold Technology™ simul-

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Lower Leg Ulcers

Wound management is a considerable burden on health systems, in Canada and elsewhere, significantly impacting health and quality of life of individuals and their families (CIHI Compromised Wounds in Canada, 2013).



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COVID-19 Pandemic:
Caring for the Carers Webinar Series

Wounds Canada Supporting Our Health-care Community

By Olena Veryha, Sales, Marketing and Communications Manager, Wounds Canada



When the COVID-19 pandemic began to affect an increasing number of Canadians, Wounds Canada considered the implications for health-care systems and investigated ways it could support health-care professionals (HCPs) working on the front lines. Wounds Canada developed a series of webinars in which the participants themselves would dictate the discussion, explain their thoughts and concerns, and ask questions in a safe, non-judgmental environment.

In April 2020, the webinar series COVID-19 Pandemic: Caring for the Carers was launched. The series was hosted by Heather Orsted and Jackie Hickey, both nurses with collective experience living through the outbreaks of the HIV/AIDS, SARS and H1N1 pandemics. Expert panelists

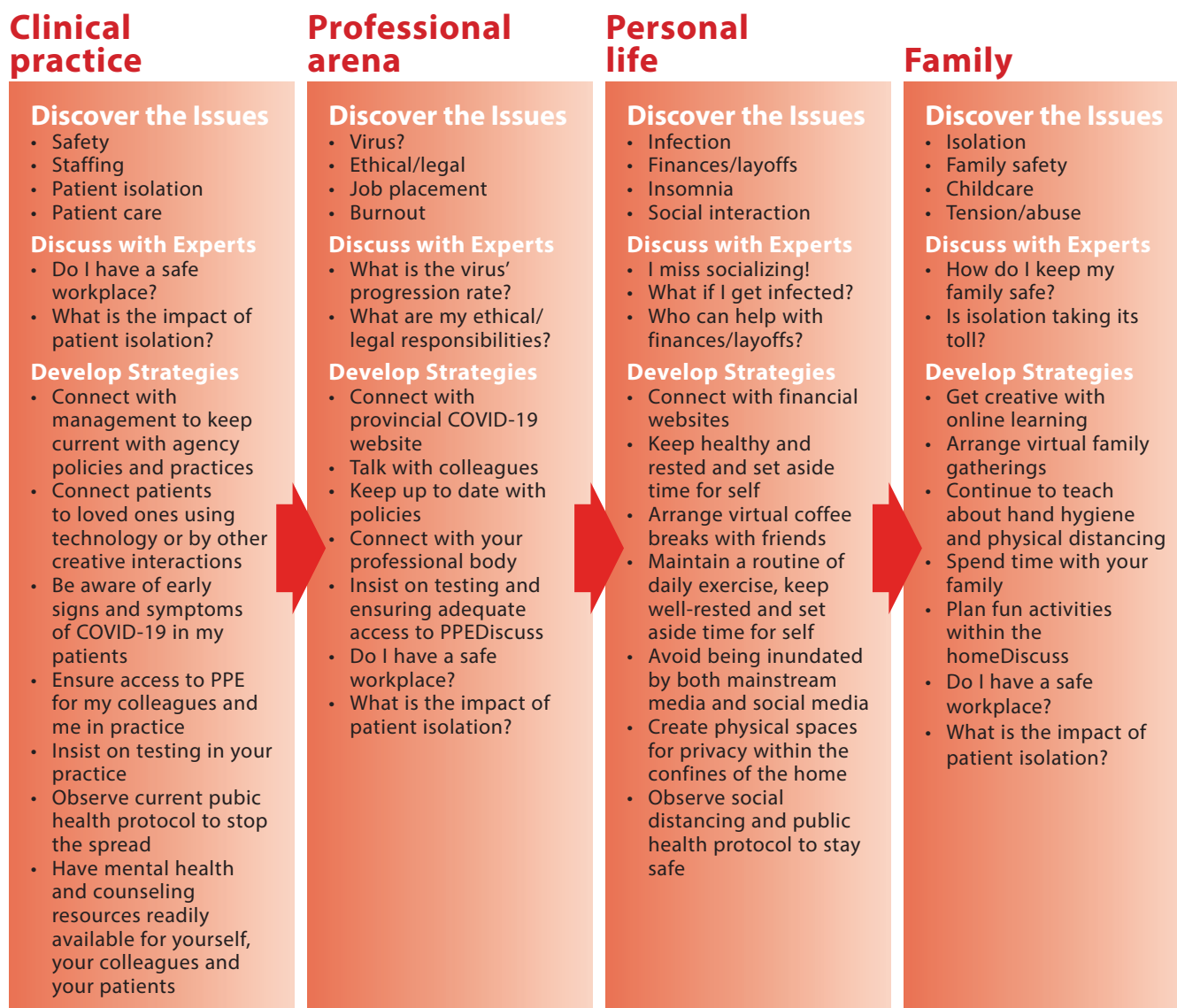
Noha George, Janet Kuhnke and Ranjani Somayaji shared insights and thoughtful commentary, and offered strategies intended to lessen anxiety levels and provide concrete steps for coping with the pandemic.

The webinar series was inspired by Ian Henschke's model,¹ which is based on identifying issues, delving into details and developing coping strategies. It comprised three webinars, each with a specific focus:

- Discover the Concerns
- Discuss with Experts
- Develop Strategies

There was time scheduled between the sessions to allow the facilitators, panel and participants to reflect on the discussions and determine the specific topics on which the subsequent webinars would be focused (see Figure 1).

Figure 1: Navigating a Pandemic



Not surprisingly, the first webinar, Discover the Concerns, revealed many serious issues facing HCPs in both their professional and personal lives. Participants had a chance to voice their opinions and answer a series of polling questions to state their concerns, in four distinct areas: clinical practice, professional arena, personal life and family. The following indicates their primary concerns:

Clinical practice:

- Safety with lack of personal protective equipment (PPE)
- Emotional impact of patient isolation
- Ability to provide good basic care
- Staffing shortages

Professional arena:

- Future course of the virus
- Moving from usual role into another role
- Ethical and legal implications

of patient care with lack of resources

- Burnout

Personal life:

- Social engagement and volunteering
- Risk to own health
- Financial issues and layoffs
- Insomnia

Family:

- Infecting loved ones
- Confinement of the family

- Child care
- Tension/Abuse

These concerns were then explored in greater depth in the second session, Discuss with the Experts, where panelists provided their insights into a range of topics such as safety in the workplace, virus progression rates, impact of patient isolation, legal and ethical responsibilities, loneliness, fear of getting infected or transmitting infection to family members, financial stresses, worries about layoffs, and the significant emotional and mental toll of the pandemic. Panelists explored and answered many questions, and participants related their personal experiences. Throughout the engaging and thought-provoking session, it was apparent that no one was alone in their concerns and in the anxiety they were experiencing.

In session three, Discovering Strategies, participants and panelists discussed resources and coping methods. To address the clinical and professional concerns, it was recommended they:

- Connect with management and colleagues to keep current with agency policies and practices related to COVID-19
- Contact their professional bodies to keep up to date with their colleges' policies
- Encourage patients to identify and talk about their feelings.
- Help patients and families find personal and creative ways to stay emotionally connected to reduce the impact of isolation
- Continue to teach and

reinforce hand hygiene and physical distancing

- Access reliable and current COVID-19 resources

To address well-being, both physically and mentally, it was recommended they:

- Keep a healthy routine and diet and be mindful of getting adequate rest and exercise daily
- Encourage timeouts (to go for a walk, read a book, listen to music) and ensure family members know that this is needed "space"
- Create physical spaces for privacy within the confines of the home
- Arrange virtual coffee breaks with friends and family to reduce the impact of isolation within the home
- Plan fun activities within the household
- Get creative with online learning and pursue hobbies
- Avoid being inundated by both mainstream media and social media (and take an occasional day off from media and technology)
- Access recognized and reputable financial and/or emotional/mental health resources

A series of [resource links](#) and a [tip sheet](#) were prepared to help participants stay current on COVID-19 and explore professional, health-care, government, financial and mental health information and guidance.

These resources can be accessed on the Wounds Canada website. Each session of the Caring for the Carers series is available on the [Webinar Archive](#) page. 📺

The Panel

Noha George, RP MSW RSW, is a registered psychotherapist and clinical social worker who has been practising in Ontario for 25 years. Since 1995, she has journeyed with individuals, couples and families who have experienced trauma, with the goal of facilitating hope and healing and planting new beginnings.



Her clinical experience includes working within the not-for-profit sector, the inpatient hospital rehabilitation setting and the private sector.

Janet L. Kuhnke, RN BA BScN MSc ET PhD, is a registered nurse of 35 years. She is a Nurse Specialized in Wound, Ostomy, Continence Care (NSWOCC), and an assistant professor of Baccalaureate Nursing at Cape Breton University.



Her doctorate in psychology focused on quality of life and mental health and wellness of patients living with chronic diabetic foot ulcers.

Ranjani Somayaji, BScPT, MD, MPH, FRCPC, is an infectious disease specialist with Alberta Health Services who has clinical expertise in the care of persons with chronic wounds. Her research is focused on understanding the risk for and impact of acute and chronic infections on populations.





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WCI Spotlight

Focus on the Prevention and Management of Skin Tears (A104MWN)

Comprising two online modules and a live, interactive webinar (completed in that order), the Focus on the Prevention and Management of Skin Tears pro-

"I found it [the program] very well run . . . I felt [the faculty] incorporated a lot of discussion and it was nice to hear others are having similar issues and we could learn from one another."

—Program participant

gram is based on the content of the Wounds Canada document Best Practice Recommendations (BPR) for the Prevention and

Management of Skin Tears.

If you are a nurse or allied health provider, and consider yourself novice or advanced-beginner in the area of wound-care, then this course is designed for you! This program is developed and delivered by national experts and are designed based on adult learning guidelines.

In the first module, students review the BPR and are tested on their knowledge of the document's key components. The second module applies the knowledge learned from reviewing the BPR to a case study, using the Wound Prevention and Management Cycle. After successfully completing the two online modules, students attend a live,

interactive webinar, where they discuss with expert faculty and fellow students what practice changes they have (and have not) been able to implement specific to the online modules. Students are encouraged to discuss the barriers they faced when attempting to make personal or organizational practice

What Programs Are Right for You?

To find out more about the Focus on the Prevention and Management of Skin Tears: Knowledge program and other WCI programs, visit the WCI website at

www.woundscanadainstitute.ca.






change. This sharing of experience allows students to develop strategies to overcome barriers and develop their own professional networks.

A recent annual review of student evaluations found that 100% of students “strongly agreed” or “agreed” not only that this program met their expectations, but that it enhanced their knowledge as well. All

respondents also “strongly agreed” or “agreed” that they will use information learned in their practice. Regarding the program content, one student wrote, “I found the skin tear risk assessment and risk reduction tools very informative and will be bringing it to my Clinical Manager to implement in our workflow.” Responding to a question about how they will

change their practice because of completing the A104MWN program, another student wrote, “Assessment/reassessment and building interdisciplinary team(s). . . .”

For more information on the **A104MWN program** (Focus on the Prevention and Management of Skin Tears), visit the **Wounds Canada Institute** website. 



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[†] Compared to previous versions. **References:** 1. Smith+Nephew December 2018. PICO 14 Service Life Testing: 14 Day Device Lifespan. Internal Report. RDY18/132. 2. Smith+Nephew 2018. The review of evidence supporting the use of PICO in wounds > 2cm depth. Internal report EQ-AMM-PCS230-001 v2. 3. Smith+Nephew 2019. Research & Development Report PICO 14 and PICO 14 Initial Pump Downward Maintenance Pump Down Time Out RDY19/084. 4. Dowsett C, Hampton J, Hynd D, Skyring T. Use of PICO to improve clinical and economic outcomes in hard-to-heal wounds. Wounds International 2017; 8(6):3-5. 5. Kriener R, Owe C, Reymann A, Naylor D, James H. A prospective, randomised, controlled clinical trial on the efficacy of a single-use negative pressure wound therapy system, compared to traditional negative pressure wound therapy in the treatment of chronic ulcers of the lower extremities. Wound Repair Regen. 2019 May 14. [Epub ahead of print].

*Trademark of Smith+Nephew (August 2019 Smith+Nephew, 21013) (C)PICO14.

Long-term Care: Behind the Curtain



By Crystal McCallum, RN MCISC

The horrific infection and death rates in long-term care (LTC) due to COVID-19 have illustrated the chronic under-resourcing faced by the facilities charged with caring for our most vulnerable Canadians. To help alleviate staff shortages, furloughed physicians and military personnel were brought in to assist as care aides. Several factors contributed to the staff shortages during the pandemic:

- Facilities were already running lean before the COVID-19 outbreak.
- Staff were restricted from working at more than one facility to reduce transmission from one location to another.
- The number of staff ill from the virus—and thus restricted from work—was relatively high in LTC.

Crystal McCallum, Director of the Wounds Canada Institute, has had extensive experience working in LTC as a PSW (personal support worker), RPN and RN. Below, she outlines her experience of a typical day and evening shift in LTC pre-pandemic, pulling back the curtain on the demands placed on personal support workers inside such facilities. When asked what her advice would be to the health-care workers and military personnel being deployed into LTC to assist with the personal care of residents she said: “If I had never worked in long-term care, I would need to

know more about the culture of care—what a day looks like in long-term care.”

She provides here an outline of what most “outsiders” don’t realize happens every day. Even without the added challenge of a pandemic, is the scenario she reveals an appropriate or humane way to treat our most vulnerable residents and the people who care for them? (See companion article, “Wounds Canada’s Response to the Canadian Armed Forces’ Report on Their Experience in LTC During the Pandemic,” on page 18.)



Day Shift

On day shift, residents in LTC, in general, must be awake, have received or been assisted with personal care and be in the dining room by 8:30 a.m. Personal care may include varying degrees of assistance with activities of daily living such as:

- Personal hygiene (modified bed-bath, hair care, shaving of facial hair, oral care, application of any treatment creams, deodorant and/or make-up)
- Toileting and/or incontinence care (including the emptying of any collection devices like catheter and ostomy bags)
- Dressing (including the application of compression garments when in use)
- Application of glasses and hearing aids (if in use)
- Application of treatment creams (if in use)
- Transfer to a wheelchair (if the resident uses one)
- Bed making (stripping and remaking the bed if it is soiled)
- Assistance with walking or locomotion to the dining room

With very few exceptions, ALL residents must eat/be fed in the dining room.

Transfers may require the use of mechanical lifts or other transfer aids such as canes, walkers or

transfer boards/discs/poles/belts. Roughly 90% of residents require extensive assistance with activities of daily living.¹

PSWs are also responsible for ensuring fall prevention strategies are in place throughout their shift. This may include the application of personal alarms, bed alarms or fall mats. They must also ensure that oxygen tanks have been filled and are appropriately set for residents requiring oxygen therapy. They fill tanks that are empty or partially empty and replace tubing and masks on a routine schedule. PSWs may also be asked to capture urine samples or obtain nasal and/or rectal swabs for monitoring purposes during this time.

PSWs are also to ensure that if in use, any pressure redistribution devices, such as therapeutic mattresses and seat cushions, hip/elbow/heel protectors, and bed positioning devices are in place and functioning properly. This task is ongoing throughout the day.

On average, two personal support workers provide this care for about 20 residents over a two-hour period. That's roughly six minutes for each pair of PSWs to provide each resident with personal care each morning.

In the dining room, PSWs are responsible for providing residents with varying degrees of assistance with eating and drinking (including the

consumption of nutritional supplements). This assistance varies from supervision to extensive assistance, meaning the PSWs feed the residents. Due to high rates of dysphagia, diets vary from regular to thin or thickened fluids, and from regular to soft, minced or pureed food. Roughly 75% of residents require assistance with eating. Of residents in long-term care facilities, 65% are diagnosed with hypertension, 28% with diabetes and 26% with gastrointestinal disease.¹ On average each pair of PSWs has one hour to assist 20 residents with eating and drinking. That's roughly three minutes per resident.

After breakfast, each pair of PSWs is responsible for:

- Providing two to three of their residents with bathing or showering assistance (residents receive two baths/showers per week and more if incontinent). Assistance with bathing also includes assistance with nail care, weighing the resident and measuring their height (monthly).
- Providing all of their assigned residents with varying degrees of assistance with toileting and/or incontinence care (including the emptying of any collection devices such as catheter and ostomy bags). On average, 79% of residents have bladder incontinence and 59% have bowel incontinence.¹
- Assisting roughly half of their assigned residents into bed or a reclining chair for a morning rest. This may require the use of mechanical lifts or other transfer aids.
- Serving a morning snack to each resident (and providing eating and drinking assistance to those who require it)
- Assisting residents to activities within the care home

On average, each set of PSWs has roughly two hours to complete all of these tasks for or with their assigned residents before getting their residents back to the dining room for lunch. That's roughly six minutes per resident per pair of PSWs. During this time, each PSW is to have taken a 15-minute break.

Lunch is a repeat of breakfast.

After lunch, each set of PSWs is to provide their



assigned residents with toileting assistance and/or incontinence care (including the emptying of any collection devices such as catheter and ostomy bags) and assist roughly half of their assigned residents into bed or a reclining chair for an afternoon rest. This may require the use of mechanical lifts or other transfer aids. Any baths/showers that were not completed earlier in the shift are completed now.

On average, each set of PSWs has roughly two hours to complete all of these tasks for or with their assigned residents. That's roughly six minutes per resident per pair of PSWs. During this period, PSWs are to have taken a 30-minute lunch break and a 15-minute afternoon break.

Before the end of their shift, PSWs must have documented the following:



- Assistance provided to their residents during their shift
- Application of any treatment creams, compression garments and/or visual or hearing aids
- Use of any fall prevention equipment and/or oxygen therapy provided
- Amount of food, fluid and nutritional supplement intake of each of their residents
- Behaviours exhibited by their residents and whether or not their resident complained of or displayed signs of pain or impending or actual skin damage
- Amount of urinary output and/or their weight and height

Evening Shift

On evening shift, each set of PSWs serves after-

noon snacks to their assigned residents (and provide feeding and drinking assistance to those who require it). They provide assistance with toileting and/or incontinence care (including the emptying of any collection devices like catheter and ostomy bags) and assist residents to activities within the home. Like their colleagues on the day shift, PSWs on the evening shift must also ensure fall prevention strategies are in place, oxygen tanks are filled and set properly, and pressure redistribution and positioning devices are in place and properly used.

On average, each set of PSWs has roughly two hours to complete all of these tasks for or with their assigned residents. That's roughly six minutes per resident per pair of PSWs. During this period, PSWs are to have taken a 15-minute break. Residents are assisted to the dining room by 5:00 p.m.

Dinner is a repeat of breakfast.

After dinner, each set of PSWs is responsible for:

- Assisting residents to activities within the home
- Providing two to three of their residents with bathing or showering assistance, including nail care and weighing of the resident and measuring their height (monthly)
- Providing all of their assigned residents with varying degrees of assistance with toileting and/or incontinence care (including the emptying of any collection devices such as catheter and ostomy bags)
- Assisting their assigned residents with evening care—oral care, application of treatment creams, removal of compression garments, removal of glasses and hearing aids, changing into night clothes
- Assisting almost all of their assigned residents into bed. This may require the use of mechanical lifts or other transfer aids
- Serving an evening snack to each resident (and providing eating and drinking assistance to those who require it)


On average, each set of PSWs has roughly three hours to complete all of these tasks for or with their assigned residents. That's roughly nine minutes per resident per pair of PSWs. During this

period, PSWs are to have taken a 30-minute dinner break and a 15-minute evening break.

Before the end of their shift, PSWs must complete the same documentation as their day shift colleagues (see above).

This level of care is dictated by the Long-Term Care Homes Act, and compliance is monitored by the provincial ministry of health and long-term care—in this case Ontario's.

The PSW tasks noted above are usually possible to accomplish if no resident falls, becomes acutely ill (40% of residents need monitoring for an acute medical condition) or exhibits responsive behaviours, an unrealistic expectation in the average LTC facility. Over 90% of residents in long-term care today have some form of cognitive impairment (64% have a diagnosis of dementia), and nearly half of all LTC residents exhibit some form of responsive behaviours (45%).¹ Interpreting the needs of residents who cannot effectively communicate is challenging, and requires diligent assessment, investigation and intervention—which take significant time. PSWs are doing the bulk of this work. Physical and chemical restraints (e.g., antipsychotic drugs) are not the solution to responsive behaviours. In fact, LTC homes are penalized for such interventions.

Even under normal circumstances, this is a very stressful working environment and involves a tremendous amount of physical labour and psychological and emotional resilience on the part of the PSWs. PSWs strive to provide more than the basic level of care, while treating their residents with respect and dignity, allowing them to express themselves and participate in decisions, encouraging independence and providing for their safety and privacy. During peak COVID-19, the demands and consequences were overwhelming, and it is no surprise that the Canadian Armed Forces reportedly observed, in the LTC homes where they were assigned, neglect, improper care (including wound prevention and care), unsafe and unclean environments, and a lack of resident respect and dignity. 

Wounds Canada's Response to the Canadian Armed Forces' Report on Their Experience in LTC During the Pandemic

By Amanda Thambirajah, Director of Government Relations, Wounds Canada

The recent news about the Canadian Armed Forces' reports on long-term care homes in Ontario² and Quebec³ has been eye-opening for many people, but we are not surprised. Wound prevention and care have been problems across Canada in all health-care settings for some time—a point that Wounds Canada and other organizations have repeatedly raised in the past with governments and other decision makers.

Many of the observations in the military's report relate to horrific pressure injuries. For wounds to reach stage 4 or to be unstageable means that basic, common-sense risk assessment and prevention measures were not carried out. As health-care professionals know all too well, the sight and smell of such a wound are horrifying, and the distress, pain and harm to the resident are immeasurable. The fact that our long-term care homes had such severe wounds points to unconscionable gaps in a number of areas, among them a lack of expertise on site, poor co-ordination between long-term care, acute care and wound care experts, and inadequate policies or implementation of policies designed to provide even baseline care.

The military's report succinctly points out that long-term care staff have not been provided with the proper equipment, supplies

and training to prevent and manage wounds. To make matters worse, they seem not to have access to appropriate skin and wound care supplies as basic as barrier creams and dressings or adequate access to wound care experts. Instructions on repositioning to prevent and manage pressure injuries are not being followed. Inspections have been inadequate.

Wounds Canada has contacted various levels of government and put forward a series of recommendations that could be implemented quickly to help Canadian LTC homes. Wounds Canada recommends the following actions be taken immediately by the government ministries responsible for long-term care:

- Provide wound education and training to staff, for both regulated and unregulated health-care professionals
- Increase staffing,¹ equipment and supplies in long-term care homes, especially for wound prevention and care
- Ensure that regular and surprise quality inspections of long-term care homes are carried out by inspectors with working experience in long-term care, and that action is taken on identified issues. Inspectors should be equipped with the knowledge and skills to advise homes on strategies to improve quality.
- Ensure best practices related to wound prevention and management are implemented in all long-term care homes
- Improve access to wound care experts
- Ensure better co-ordination between long-term care, acute care and community care, and implement wound care pathways from hospital to home and community care with set measurables, monitoring and evaluation
- Develop policies that prevent wounds such as pressure injuries and infected wounds in long-term, acute and community care

Wounds Canada: Continued Advocacy

The wound care issues outlined in the military's report have long existed and been overlooked in LTC homes across Canada, as well as in acute care

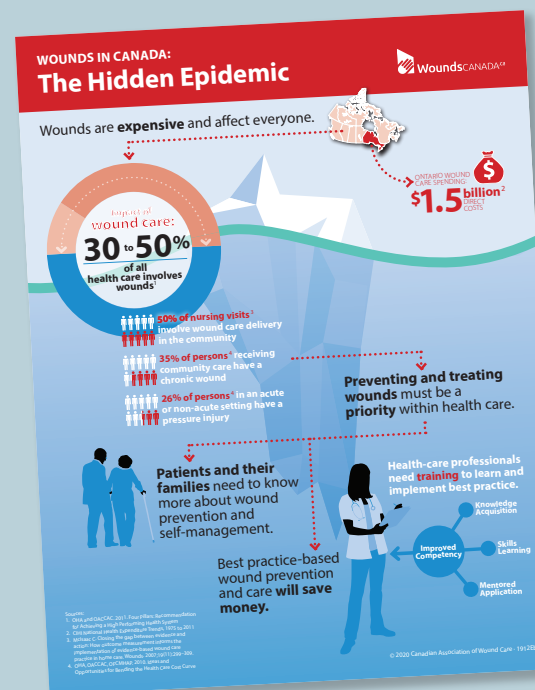
and community care. Wounds Canada has started hearing from health-care professionals that pressure injuries, amputations and infected wounds are on the rise across the health-care system because of pre-existing issues and the additional pressure that COVID-19 has placed on health-care resources.

Wounds Canada continues to advocate for a higher priority for wound prevention and care with all governments across Canada. Right now, Canada spends \$4.3 billion on wound care. By investing in prevention and better management earlier on, if a wound occurs, patients will see improved health outcomes, and significant savings will result. We are asking the federal government to work with the provinces and territories to create national standards on wound care, and to ensure that any standards on long-term care include wound care.

We will continue these activities until governments across Canada provide the type of universal, accessible care that our most vulnerable citizens—and wound care patients—deserve.

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"The interaction between the presenters and spokes. I gained a lot of new, valuable information that I will integrate into my practice."

– Participant



Dr. R. Gary Sibbald is a dermatologist/ internist, wound care specialist. Recognized internationally for his research and clinical work, Dr. Sibbald helped launch ECHO (Extension for Community Health Care Outcomes) Ontario Skin and Wound Care.

We sat down with him to discuss ECHO

Q: Please describe ECHO. What attracted you to the model for skin and wound care?

A: Skin and wound care has traditionally been practiced in silos. Providers often work independently of each other, whether acute care, long-term care, nursing homes, complex continuing care, home care or other sectors. Doctors, nurses and allied health professionals are working in different locations under various models. This creates obstacles in providing integrated interprofessional care.

ECHO helps address this. ECHO moves knowledge, not patients. We connect with 20+ clinics at once via Zoom in weekly 2-hour sessions. We use a 'Hub and Spoke' model. The 'Hub' teaches a short didactic lecture based on International Interprofessional Wound Care Course (IIWCC) curriculum, RNAO Best Practice Guidelines and other expert resources. We then collectively discuss real, de-identified, patient cases submitted by 'Spoke' participants.

Q: How is ECHO different than telemedicine?

A: ECHO is designed to build capacity in the community and to link together the three key wound care professional groups: doctors, nurses and allied health. We do not take over responsibility of care of patients. Instead, we help participants care for their own patients, in their own communities.

Q: Who are the partners in this ECHO program and who is on your "hub" team?

A: Our program is funded by the Ontario Ministry of Health and Long-Term Care, through the Mississauga Halton LHIN. The three partners are WoundPedia, Queen's University and the RNAO. The Hub team includes family doctors, advance



Mississauga ECHO Hub Team

practice nurses, and allied health providers. We also have a roster of guest experts. Our program is part of a collective of over 20 ECHO programs in Ontario. We are accredited by Queens University and award CME credits to attendees.

Q: What can a participant expect to gain? What are the obligations?

A: Participants gain experience through situational learning with an interprofessional collaborative approach. We discuss their patient cases. Many participants have found this extremely helpful for their wound care patients with complex needs who were not meeting expected care pathway milestones. We ask in return for regular attendance and we do expect participants to present at least one of their own cases for discussion. For more information visit our website.

Q: Is there a tuition fee and are there openings?

A: There is no charge for Ontario based providers. We have openings for October 2020, when we will discuss lower leg and foot ulcers and we have openings in January 2021 for pressure injuries.



ECHO Session

Topics discussed

Diabetic foot ulcers, leg ulcers, pressure injuries, wound bed preparation, infection, malignant, post-surgical wounds, traumatic injuries, peristomal, lymphedema, acute infection and other wound and skin care topics.

Wound Sleuth

By R. Gary Sibbald, MD and Pat Coutts, RN

Small Red Spots on the Lower Legs

History: A 43-year-old airline company receptionist presented with itchy legs and a bright red speckled cayenne-pepper-like appearance to the lower legs (see Figures 1 & 2). She has seasonal allergies and previous reactions to ibuprofen and shellfish. Our patient is on no systemic medication.

Examination: Clusters of small bright red purpuric lesions were visible on the lower legs below the knees. Mixed with the lesions were resolving brown-yellow spots. None of the lesions were palpable to the fingertips. There was evidence of venous varicosities and a palpable dorsalis pedis pulse.

Investigations: Her hemoglobin was normal at 135 g/L (normal 110–147 g/L) with normal renal and liver function tests. The HbA1c was 6.1%, indicating prediabetes with the lab value of $\geq 6.5\%$ as diagnostic of diabetes. The immunoglobulin electrophoresis was normal, and ANA (antinuclear factor) was negative.

Q What is it, and what is the cause?

Diagnosis and potential etiologies: These are benign pigmentary purpura due to leaky red blood vessels from the small capillaries on the surface of the skin. The leakiness can be due to venous disease, especially with swelling at the end of the day. Such leaky

blood vessels have also been linked to a potential cell-mediated immune response. The ingestion of associated drugs was detected in 14% of a large published survey of 174 cases.¹ The authors identified agents such as acetaminophen, ASA, NSAIDs, furosemide, bromine-containing drugs, carbamazepine, thiamine or sildenafil.



Figures 1 & 2: Clusters of small bright red purpuric lesions visible on the lower legs below the knees

Other uncommon potential associations are infections and, rarely, in long-term cases (years), cutaneous T cell lymphoma, macroglobulinemia and rheumatoid arthritis. Most cases are idiopathic.

A Differential diagnosis: Pigmentary purpura can be distinguished from vasculitis through touch. In vasculitis, the lesions are palpable to the fingertips. Cutaneous small vessel vasculitis (formerly leukocytoclastic vasculitis) may involve internal organs in 50% of cases—commonly joints, kidney and liver, and less commonly lungs, heart and GI tract.

Also in the differential diagnosis are vasculopathies with a net-like small-vessel prominent


structure around the ankles, plus atrophie blanche (white atrophy areas and non-palpable purpura).

Treatment

Treatment may include the use of oral bioflavonoids or ascorbic acid. If the area is itchy, topical calcineurin inhibitors (prescription for tacrolimus 0.1% ointment or pimecrolimus cream) can be used and will not thin the skin like topical steroids. There are newer prescription H1 antihistamines that would also help with itch and do not cause drowsiness with 24-hour coverage (bilastine 20 mg or rupatadine 10 mg); or cetirizine (10 mg OTC and 20 mg Rx) that can cause drowsiness in 20% of individuals, so it should be taken at night.

Tip

Topical moisturizers or dermatological preparations can be kept in the refrigerator to relieve itch with a cool sensation upon application.

If venous disease is evident with a palpable foot pulse, support stockings, knee high with 8–15 mm or 15–20 mm Hg may be useful. Other systemic alternatives include pentoxifylline 400 mg daily, or colchicine, 0.6 mg bid. 

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HARM REDUCTION IN PRACTICE:

A Starter's Guide for Incorporating Harm Reduction into Skin and Wound Care Clinical Practice

By Erin Telegdi, RN BA BScN

Harm reduction as a philosophy supports people to protect, maintain and improve their health and well-being without requiring abstinence from substance use. This approach works in solidarity with people who use drugs to address the systemic inequities and criminalization that result in poor health outcomes.

During nursing school, I remember being warned about people who use drugs. Clinical instructors and health-care professionals would caution, “Be careful—they’re drug seeking; they’re team splitting. They’re not really in pain, they just want opiates. If they really cared about their health, they wouldn’t be doing drugs.” These perceptions of people who use drugs (PWUDs) are prevalent in health-care systems. But thanks to decades of tireless advocacy by PWUDs and their allies, our collective consciousness has started to shift.

For the past three years, I have been work-

ing as a registered nurse (RN) at the Moss Park Consumption and Treatment Service (CTS), a satellite program of South Riverdale Community Health Centre in Toronto. This is one of 15 such services across Ontario where people can go to use pre-obtained drugs (mostly by self-injection) in the presence of workers specially trained in overdose response (see Figures 1 & 2). In addition, CTSs offer wraparound services, including community-driven programming and access to RN and nurse practitioner (NP) clinical care. Consumption and Treatment Services are a new addition to the wide variety of harm reduction-based programs operating across Canada in settings ranging from hospitals to community health centres, and to AIDS Service Organizations, among others. In this role, it has been my great honour to work for a vibrant community of people who use drugs in the Downtown East Side neighbourhood of Toronto. Because of the patience of the community for whom I work, and



the mentorship of my co-workers—most of whom bring the lived and living experience of drug use to their roles—I have been able to unlearn many of the harmful attitudes taught to me by the health-care system, and instead have learned

the ways of harm reduction. It's a philosophy that embraces and celebrates the lives of people who use drugs and honours their wisdom and right to self-determination.

Promoting and managing skin and wound



Figure 1: Street fentanyl being prepared for self-injection at the Moss Park CTS



Figure 2: Illicit fentanyl has been the overwhelming driver of the current overdose crisis

health is integral to my clinical care provision. PWUDs, and especially those also experiencing homelessness, have unique skin health needs. In a chart audit conducted of the Moss Park CTS nursing notes from July 2018 to September 2019, 50% of nursing encounters were related to skin and wound care concerns, with 45% related to skin and soft tissue infections, including abscesses and cellulitis, and a variety of other concerns including surgical wounds, traumatic injuries, pressure injuries and dermatological issues.¹ The wound care community in Canada has a rich history of prioritizing patient-driven care, and this strong value aligns with a harm reduction approach. As wound care clinicians, we know that any plan of care will only be successful if it fits into the patient's own health goals and accords with their access to supports and resources.

This article is intended to provide practical guidance for clinicians who may be new to the concept of harm reduction and who wish to learn how to incorporate harm reduction philosophy into their skin and wound care practice.

Step 1: Familiarize yourself with harm reduction literature and resources.

According to the Canadian Drug Policy Coalition, harm reduction is a “comprehensive, just and science-based approach to substance use. It represents policies, strategies and services, which aim to assist people who use legal and illegal psychoactive drugs to lead safer and healthier lives. . . . Harm reduction enhances the ability of people who use substances to have increased control over their lives and their health, and allows them to take protective and proactive measures for themselves, their families and their communities.”² The Canadian Nurses Association, Canadian Association of Nurses in AIDS Care, and Harm Reduction Nurses Association add that harm reduction is an “essential evidence-based approach for reducing the adverse health, social, and economic consequences of substance use without requiring abstinence.”³ “[H]arm reduction recognizes the importance of reducing the harms (health, social and economic) associated with the



Figure 3: People who use drugs and their allies demonstrate in downtown Toronto for the National Day of Action on the Overdose Crisis, April 2019.

use of drugs while also acknowledging that such harms are a direct result of prohibition and criminalization.”⁴

Note that the harm reduction movement has been developed and driven by people who use drugs for people who use drugs. To support a harm reduction approach, one must be mindful and respectful of the advocacy that has been and is being done by PWUDs to defend their rights and to promote access to competent, compassionate care (see Figure 3). For an excellent account of the development of the harm reduc-



Figure 4: Indigenous medicines used as part of a Sharing Circle facilitated by Indigenous harm reduction activist Les Harper at the Moss Park CTS. Indigenous people are disproportionately affected by drug criminalization and the overdose crisis.

tion movement in Vancouver's Downtown East Side, I recommend the book *Fighting for Space: How a Group of Drug Users Transformed One City's Struggle with Addiction* by Travis Lupick.⁵

Fundamental to the harm reduction philosophy is an understanding of the ways in which perceptions of, and laws around, drug use are deeply rooted in colonialism, racism, xenophobia and classism. Learning the social and political history of drug use and its criminalization can greatly enhance a clinician's competence in working with PWUDs (see Figure 4). For a deeper understanding of the socio-medical construction of the concept of "addiction," and the socio-political history of drug criminalization, I recommend *The Globalization of Addiction: A Study in Poverty of the Spirit* by psychologist and historian Bruce K. Alexander.⁶

The following organizations can provide a wealth of position statements and reference lists for literature and evidence regarding harm reduction: Canadian Drug Policy Coalition, Canadian Nurses Association, Canadian Association of Nurses in AIDS Care, Harm Reduction Nurses Association, and Canadian AIDS Treatment Information Exchange.

Step 2: Do some serious self-reflection.

According to Gagnon et al. (2019), clinicians working with PWUDs must "examine their power, privilege, values, and assumptions. . . ."⁴ Harm reduction is a philosophy that diverges greatly from what most of us have been taught about drugs and the people who use them, either by society or in our

professions. Self-reflection involves thinking about your personal attitudes, thoughts and beliefs about drug use and your own experience with substances (wine counts!)—either with yourself or with people you love. How are you implicitly or explicitly communicating your personal beliefs to clients who use drugs? What impact does that have on their sense of safety, trust and ability to engage actively in plans of care?

Expand this reflection to your care team. Have conversations with your colleagues about how you have treated PWUDs in the past, and how you can make improvements. It is important that we, as health-care professionals, are accountable for how our implicit and explicit biases impact the quality of care and outcomes for our clients. When people feel judged, they may not trust you to provide them with care and to develop care plans that will work for them. Further, reflect on how your larger organizations either enhance access or create barriers to equitable care for PWUDs. How can you advocate within your own organizations to amplify the voices of PWUDs and support a shift to harm reduction-based care?

Step 3: Language is important; abstinence is not always the goal.

Think about the language you use to describe PWUDs and drug use. Work with your teams to increase your capacity to use language that is respectful and non-stigmatizing. For example, in the harm reduction community the term *people who use drugs* is used. This term is broad and does

Language is Important⁷

Using non-stigmatized language is key to the harm-reduction approach:

- Use people-first language. For example, say "person who uses opioids," rather than "opioid user" or "addict."
- Use language that reflects the medical nature of substance use disorders. For example, say "person experiencing problems with substance use," rather than "abuser" or "junkie."
- Use language that promotes recovery. For example, say "person experiencing barriers to accessing services," rather than "unmotivated" or "non-compliant."
- Avoid slang and idioms. For example, say "positive test results" or "negative test results," rather than "dirty test results" or "clean test results."

not make judgements or assumptions about an individual's relationship with drugs. It is not for clinicians to decide if someone's drug use is problematic. Some individuals may want to decrease their use or be abstinent, while others do not. For some, their substance use may be an important part of their physical and emotional survival. Language that favours abstinence from drug use is alienating. PWUDs have a wide variety of goals related to their drug use and to their overall health and well-being. It is vital that the personal goals of PWUDs are respected and prioritized. People may come to you with skin and wound issues that are related to their drug use, but that never means that abstinence from drug use is the "solution." A harm reduction approach to care acknowledges that people can use drugs *and* be healthy. It is our job to work with people to find ways to help them mitigate risk and optimize health.

Step 4: Know your local harm reduction resources.

Most large cities in Canada have a growing number of harm reduction resources and organiza-

tions, and many have supervised consumption services. Some cities are establishing safer supply programs, where prescribers offer long-acting morphine and short-acting hydromorphone as an alternative or adjunct to traditional methadone and suboxone therapies. Find out what is available in your area.

For smaller or more rural communities, harm reduction services may be scarce; consider contacting your local AIDS Service Organization, as they will have harm reduction services and information. Patients who use drugs may be aware of and connected to these services, but if they are not, it is an opportunity to support them with access to information, support and the harm reduction supplies that help keep them safe and healthy (such as naloxone kits used to reverse opioid overdoses, safer-injection kits and safer smoking kits, see Figure 5).

Your client may be receiving nursing or other health-care services at a drop-in, supervised consumption service or other community organization. Think about including these supports in your circle of care, especially if these are the places where your client is most likely to access wound care services. Also, consider the ways in which knowledge exchange can take place. What can wound care specialists and harm reduction experts learn from one another? How can we all collaborate to improve skin and wound outcomes for PWUDs?

Step 5: Look at the whole patient, not just the hole in the patient.⁸

As with all patients, approach the health concerns of PWUDs holistically, and with openness and curiosity. If your patient is a person who uses injection drugs, inquire about what, where and how they inject and the frequency of use. Also determine how frequently are they able to access basic hygiene care, such as showers or laundry services, and nutrition support. Do they access safer injection services? How do they access harm-reduction supplies? Knowledge around safer injection techniques and vein preservation can help to support skin and vein health. For example, swabbing the

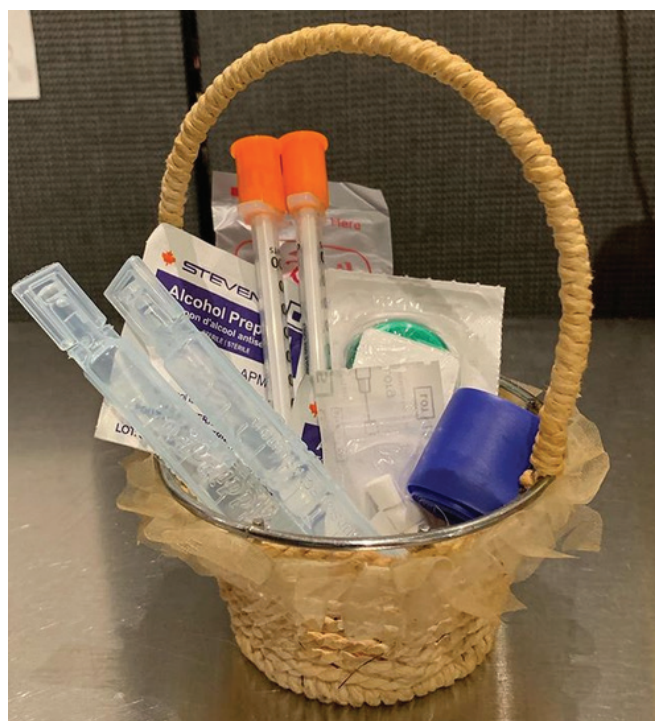


Figure 5: A safer injection kit: syringes, cooker, alcohol swabs, sterile water and tourniquet.

skin prior to injection, rotating injection sites and not re-using syringes/needles are ways that people can protect their health when injecting. We must consider all of this when working to create a plan around skin and wound care. Dressing changes need to be co-ordinated around people's access to shower services, and it is important to know where people inject, so that the dressing does not obstruct their access to this site. If avoiding the injection site is important to wound healing, support patients to find alternative veins to use when injecting.


Engaging a community and family-centred care approach is key to providing care to PWUDs. It is a misconception that folks who are homeless, street involved and/or use drugs do not have strong family and community ties. While some do experience social isolation, health-care professionals cannot make that assumption. Many of those with whom I work have rich networks of family, friends who are like family, and also more formal social service and health-care supports that are key to keeping them healthy and happy. Ask people about their networks. With consent, engage their informal and formal networks in care planning. As we know, it takes a village to heal a wound.

Conclusions

This article has aimed to inspire you to incorporate or enhance harm reduction philosophies in your clinical teams and practice. This is neither a definitive nor exhaustive resource but reflects some of what I have gleaned from working in the harm-reduction community. People who use drugs face discrimination in the health-care system, and this discrimination (whether intentional or not) leads to great inequity in health outcomes. Moreover, I write this article in the context of this country facing an accelerating overdose crisis, which has seen the loss of over 14,700 lives in Canada since January 2016.⁹ This devastating number speaks to the urgency of responding to the needs of PWUDs with care and compassion, and the ethical imperative for change in the health-care system. It is my personal and profes-

A Webinar on Harm Reduction

On June 2, 2020, Erin Telegdi led "Wound care and harm reduction for people who use drugs: A candid conversation," a webinar delivered by Wounds Canada. To learn more about Erin's efforts for positive change in working with a community that faces barriers to compassionate care, watch the [archived webinar session](#) on Wounds Canada's website.

sional goal to speak clinician-to-clinician to amplify the wisdom of the harm reduction community, and work toward building health-care services that honour and respect the lives and experiences of people who use drugs. 

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Too few, too many or just right?

How many sites should be tested to detect diabetic peripheral neuropathy?

By Virginie Blanchette, Biomed DPN PhD and
Magali Brousseau-Foley, MD DPM MSc

Diabetic peripheral neuropathy (DPN) is a widespread diabetes complication that affects up to 90% of individuals living with diabetes.¹ It is commonly divided in two forms based on the absence or presence of pain. It is well recognized that DPN is a powerful predictor of diabetic foot ulceration, and evidence establishes its role in the pathophysiology of new and recurring foot ulcers and lower-extremity amputations.²⁻³ Early detection of DPN can help to lower the incidence of these diabetic foot complications, and health-care professionals can therefore adapt their clinical practices to patients' needs. Global management of patients with DPN should be tailored according to this condition.⁴

More than 30 years ago, the 10 g Semmes-Weinstein monofilament (SWM 10 g) testing technique was described as a good method to assess loss of protective sensation (LOPS) in the clinical setting. It is still widely used for DPN screening, because, along with the inability to sense vibrations, LOPS represents one component of DPN.^{4,6} This technique is favoured by most clinicians because of its accuracy, low cost and convenience.⁷⁻⁸ A recent meta-analysis demonstrates that SWM 10 g is fairly accurate in diagnosing LOPS

in individuals with diabetes.⁶ However, there are multiple ways to perform this test and interpret its results.^{7,9-10}

Location and Number of Sites

The original SWM 10 g testing technique was designed to test 11 plantar sites: the first, third and fifth metatarsal heads and five corresponding toes, the medial and lateral midfoot and the heel.⁸ The dorsal surface between the base of the first and second toes was added to provide a more complete representation of the different peripheral nerves and dermatomes of the foot.¹¹ Later, because clinicians needed an easy and reliable test, a 10-site technique was developed.¹² A number of studies have since demonstrated that fewer than 10 sites could allow an equivalent overall accuracy. Table 1 summarizes the evidence for 1-site, 4-site and 10-site SWM techniques.^{7,9,13-15} Moreover, techniques requiring fewer than 10 sites are more practical when testing individuals with toe amputations, are less time-consuming for professionals and may extend durability (lifetime) of the SWM 10 g. It has also been reported that 4-site testing identified 90% of individuals with DPN, with one insensate forefoot site being consistent for LOPS.^{7,16} The



most common testing site for all described SWM 10 g techniques is the hallux, plantar or dorsal, but there is no evidence to confirm that this is the most sensitive site for testing LOPS.⁹

There is great variability in the methodologies of these studies, including population selection and sample sizes, that limits internal and external validity to choose the best technique.^{7,9,13-15} However, some studies—such as Baraz et al. 2014, Lee et al. 2003, Perkins et al. 2001/2010, Rayman et al. 2011, Zhang et al. 2017 and Brown et al. 2017—have fewer methodological flaws according to potential risk of bias assessment in a

meta-analysis.⁹ Their internal validity is thus considered to be at a higher level.

Three different patient responding techniques were used in all the studies in Table 1:

- yes/no technique
- forced-choice technique
- yes/no combined with site identification technique

The yes/no technique is simple: ask the patient whether they feel pressure applied. The forced-choice technique consists of asking the patient to identify whether contact with the SWM 10 g is

Diabetes Canada Guidelines: Recommendations on How to Perform 10 g Semmes–Weinstein Monofilament Resting⁵

1. Apply the SWM 10 g on patient's hand so that he or she knows what to expect. Encourage patient during testing by giving positive feedback.
2. The patient must not be able to see whether or where the examiner applies the SWM 10 g. Apply the SWM 10 g perpendicular to the skin surface and apply sufficient force to cause the filament to bend or buckle. The total duration of contact, from initial skin contact to removal of the SWM 10 g, should be approximately 2 seconds.
3. Apply the SWM 10 g along the perimeter of, not on, an ulcer site, callus, scar or necrotic tissue. Do not allow the SWM 10 g to slide across the skin or make a repetitive contact at the test site.
4. Press the SWM 10 g to the skin and ask the patient whether they feel pressure applied ('yes'/'no') and where they feel the pressure ('left foot'/'right foot').
5. Repeat contact twice at the same site, but alternate this with at least one 'mock' contact in which no filament is applied (for total of 3 questions per site).

Protective sensation is present at each site if the patient correctly answers 2 out of 3 contacts. There is a LOPS with 2 out of 3 incorrect answers. The patient is then considered to be at risk of diabetic foot ulceration.

Table 1: Evidence for 1-Site, 4-Site and 10-Site SWM Techniques

Studies	Number of Sites Tested per Foot	Number of Sites Insensitive to Represent LOPS	Sensitivity (%)	Specificity (%)
1-site Technique				
Kumar et al. 1991	Plantar hallux	1/1	100	78
Pham et al. 2000	Dorsal hallux	1/1	91	34
Perkins et al. 2001	Dorsal hallux (repeated 4 times)	a. 2/8 b. $\geq 5/8$	c. 41 d. 77	e. 68 f. 96
Olaleye et al. 2001	Dorsal hallux (repeated 4 times)	a. 2/8 b. 3/8 c. 4/8 d. 5/8	a. 62 b. 58 c. 35 d. 30	a. 84 b. 92 c. 97 d. 97
Perkins et al. 2010*	Dorsal hallux (repeated 4 times)	Both feet 5/8	72	64
Najafi et al. 2014	Dorsal hallux (repeated 10 times)	3/10	17	87
Pambianco et al. 2011	Dorsal hallux (repeated 10 times)	3/10	20	98
Brown et al. 2017	Dorsal hallux	1/1	47	73
4-site Technique				
Miranda-Palma et al. 2005	Plantar hallux; metatarsal head 1, 3, 5	1/8	86	58
Jayaprakash et al. 2011	Plantar hallux; metatarsal base 1, 3, 5	Both feet 1/8	63	93
Rayman et al. 2011	Tips of toes 1, 3, 5 dorsal hallux	Both feet 5/8	81	91
Bedi et al. 2012	Plantar hallux; metatarsal base 1, 3, 5	Both feet 1/8	49	48
Baraz et al. 2014**	Plantar hallux; metatarsal head 1, 3, 5	Both feet a. 1/8 b. 2/8 c. 4/8	a. 51 b. 46 c. 38	a. 73 b. 75 c. 87
Zhang et al. 2017	Plantar hallux; metatarsal head 1,3, 5	1/4	19	96
10-site Technique				
Armstrong et al. 1998	Dorsal between base toe 1–2; plantar toe 1,3,5; metatarsal head 1,3,5; plantar medial and lateral midfoot; plantar heel	4/10	> 90	80
Lee et al. 2003	Dorsal between base toe 1–2; plantar toe 1,3,5; metatarsal head 1,3,5; plantar medial and lateral midfoot; plantar heel	$\geq 5/10$	93	100
Zhang et al. 2017	Dorsal between base toe 1–2; plantar toe 1,3,5; metatarsal head 1,3,5; plantar medial and lateral midfoot; plantar heel	1/10	22	94

* Forced-choice technique

** Yes/no technique and identification of the site

perceived at time “A” or “B”—which may be inadequate, because the response can be guessed correctly with a probability of 50%. Therefore, the yes/no technique is expected to be more reliable and less time-consuming than the forced-choice technique.⁷

A recent study comparing SWM 10 g sensitivity using 3, 4 and 10 sites demonstrated that every technique was equally effective for screening DPN and showed a good level of intra-observer agreement and reproducibility with the yes/no technique.¹⁰

Interpretation

There is no clear answer on how many insensate sites suggest a patient is at risk of diabetic foot ulceration when using SWM 10 g testing. Thus, most studies used conservative approaches that, when adequately performed, were indicative of an at-risk foot in the presence of one insensate site. When the number of insensate sites increases, the test sensitivity remains similar or decreases, while the specificity increases.^{12,17} To date, there is no controlled clinical trial available investigating the prognostic and predictive values of SWM 10 g testing to guide clinical decision making and to improve patient outcome such as diabetic foot ulcerations and lower extremity amputations.⁷

Recommendations

In general, practice guidelines conclude that two different clinical evaluations should be performed for better test sensitivity to diagnose LOPS.^{4,18} The International Working Group on the Diabetic Foot

Accuracy and Durability of Semmes–Weinstein Monofilaments

Commercially available SWM 10 g have significant variability within and between devices, and their real bending force varies widely from the initial targeted value of 10 g. For this reason, they have a short service life and should not be used when they have lost 10% or more of their initial bending force.^{20–21} It has been demonstrated that some monofilaments, excluding single-use products, can evaluate



up to 70 to 90 patients for a 10-site testing each.²⁰ After testing 10 patients, monofilaments need a recovery time of 24 hours before further use.²¹ The Canadian BPR suggests that SWM 10 g should be rested for two hours following 100 applications (20 sites per patient for a total of five evaluations).¹⁸ Selecting a high-quality instrument and replacing it at regular intervals are important in maintaining testing accuracy.²⁰ Proper disinfection of the instrument must be performed between patients, and disposable SWM 10 g should be used for only one patient.

(IWGDF) guidelines suggest testing LOPS with pressure and vibration.⁴ The same recommendation is made in the Diabetes Canada (DC) guidelines, and they propose the same three testing sites, the planar hallux, and first and fifth metatarsal heads of

According to the studies listed in Table 1, here is how one should perform SWM 10 g testing with a conservative interpretation for maximum accuracy with a yes/no technique:

- **1 site** tested on the dorsal surface of the hallux (repeated four times): both feet with $\geq 5/8$ insensate sites indicates LOPS.
- **4 sites** tested on the plantar surface of the hallux and first, third and fifth metatarsal heads: one foot with $\geq 1/4$ insensate site indicates LOPS.
- **10 sites** tested, including one dorsal site between the base of first and second toe, and nine plantar sites on first, third and fifth toes, first, third and fifth metatarsal heads, medial and lateral midfoot and heel: $\geq 5/10$ insensate sites indicates LOPS.

both feet in high-risk (for ulceration) feet.⁵ Wounds Canada's **Best Practice Recommendations (BPR) for the Prevention and Management of Diabetic Foot Ulcers** advocates a 10-site testing technique.¹⁸ Practical guidelines from the Registered Nurses' Association of Ontario support a 4-site testing technique that includes the plantar hallux and first, third and fifth metatarsal heads.¹⁹

Conclusion

Evidence supports 1-, 4- or 10-site SWM 10 g testing for LOPS, and practice guidelines from various national and international expert groups reflect this diversity. According to research results, 4- and 10-site techniques were as effective for screening DPN as the 3-site technique recommended by the IWGDF and the DC. They all demonstrate a good level of reproductivity and should be favoured in the clinical setting. Therefore, whether a 3-, 4- or 10-site SWM 10 g testing technique is chosen, clinicians should be aware of material limitations and interpretation pitfalls, and be consistent in the way they perform clinical testing and identify DPN to ensure accuracy, reproductivity and adequate interpretation. 📱

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Mental Health and Patients Living with Diabetic Foot Complications

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For clinicians working alongside patients with diabetes, recognizing the links to mental health is an important aspect of delivering holistic treatment and support.

Understanding mental health and diabetes is challenging, as clinicians need to differentiate diabetes distress (see below), which manifests as anxiety, guilt, denial and burnout, from other mental health disorders. In addition, it is not always possible to know what came first, the distress or the diabetes.

Depression is often undiagnosed and therefore undertreated—especially as a comorbidity of diabetes.¹ Depression is present in about 20% of adults with type 2 diabetes, while diabetes distress impacts 30%.²

In addition, persons living with diagnosed mental health/comorbid conditions, such as bipolar disorder, schizophrenia spectrum disorders, and personality traits/disorders, may be at greater

risk for developing diabetes.³ This bi-directional relationship between mental health and diabetes requires ongoing research.⁴

Patients with diabetes and psychiatric disorders have an increased risk of all causes of mortality.⁵ It is therefore incumbent on those supporting patients with diabetes to screen and initiate care for mental health issues and diabetes distress.

The Link Between Persons with Diabetic Foot Ulcers and Mental Health Issues

Persons living with diabetes and diabetic foot ulcers (DFU) often experience fear of amputation.⁶ This may result in psychological stress that in turn leads to poorer diabetes self-management and reduced quality of life.⁷ As the disease progresses, patients often struggle to maintain well-being, and they may undergo a shifting self-image.⁸ As well, they may experience social isolation, loss of



independence, sleep changes and emotions that include guilt, frustration and anger.⁹ These small and insidious changes affect independence, leading over time to more “stressful days.”⁸

Economic stressors may include changes in job status (from full-time work to part-time or disability leave, for example), unplanned early retirement, and changes in work roles such as moving to a job requiring less physical activity.¹⁰ As a result of these factors, people with DFUs are at risk for depression, anxiety, fear and perpetual negative states that may contribute to negative ways-of-being in the long term.¹¹

Clinicians who ignore the relationship between diabetes and mental health issues will be hampered in delivering evidence-based, holistic care to their patients with diabetes.

This resource highlights some of the psychological issues and formal psychiatric diagnoses patients living with diabetes and foot complications may experience. As well, it outlines some of the screening tools and communication approaches that can be used by clinicians to support the team and make appropriate referrals.

Psychological Issues and Psychiatric Diagnoses

Diabetes Distress

Diabetes distress is a broad term used to describe psychological states that can occur in patients living with diabetes.^{4,12} The distress can include feelings of anger, fear, fatigue and frustration regarding one’s self-care regimen and responsibilities. The day-to-day management of diabetes is complex, and the associated distress may be experienced by both the patient and care partner but be invisible to the health-care professional.¹³ Robinson et al. (2018) described four domains of diabetes distress as including:³

- Emotional burden of living with diabetes
- Distress that comes from the diabetes self-management regimen
- Stress associated with social relationships
- Stress inherent in the patient–provider relationship

Literature supports the notion that diabetes distress causes adverse outcomes for patients with diabetes.¹⁴



Risk factors for developing diabetes distress include:

- Being younger
- Being female
- Having less formal education
- Living alone
- Having a higher body mass index (BMI)
- Having lower perceived self-efficacy
- Receiving a lower perceived level of provider support
- Having a poorer quality diet
- Believing the impact of glycemic excursions are greater than they are
- Having a greater number of diabetes complications¹⁵

Health Anxiety

Health anxiety occurs in 3–10% of the general population and may occur when a patient is faced with a new complication, a change in diagnosis or worries about an existing condition.¹⁶ In time, health anxiety may interfere with normal functioning and engagement in life.¹⁷

Generalized anxiety disorder (GAD) occurs in 5% of individuals at some time in their life. It happens when an individual finds it difficult to control their worry over a period of months and as a result experiences fatigue, irritability, restlessness, difficulty concentrating, muscle tension and changes in sleep patterns.¹⁸

Specifically, persons living with diabetes and diabetic foot ulcers often experience fear of

amputation.⁶ These experiences may also result in psychological stress that leads to poorer diabetes self-management.⁷

Patients with health anxiety benefit from cognitive-behavioural therapy and counselling. Those with diagnosed generalized anxiety disorder benefit from counselling, cognitive re-evaluation, mindfulness and problem-solving training.¹⁸

Depressive Disorders

Depressive disorders may include major depressive disorder, persistent depressive disorder (dysthymia), substance/medication-induced depressive disorder, and depressive disorder due to another medical condition or disease.¹⁹ Each disorder has specific criteria, and it is important that a qualified practitioner make the diagnosis.¹⁹ Other psychiatric diagnoses such as anxiety disorder, bipolar disorder, schizophrenic spectrum disorder, eating disorders and substance use should also be considered.

For people living with diabetes, depression is two to three times higher than in the general population.²⁰ The clinical practice guidelines from Diabetes Canada (2018) list the following risk factors for developing depression in individuals with diabetes:³

- Female
- Adolescent/young adults and older adults
- Poverty
- Few social supports
- Stressful life events
- Poor glycemic control
- Higher illness burden
- Longer duration of diabetes
- Presence of long-term complications

What can clinicians do?

Clinicians need to treat the whole individual, not just address the glucose management, ulcer or foot complication. Assessing psychological status can easily be overlooked while managing the complexities of infection, wound dressings, intravenous therapy/medications, nutritional care, offloading and ensuring effective communication within the integrated team.

In clinical settings, patients living with diabetes and foot complications should be screened for diabetes distress, depressive symptoms and anxiety using validated tools to help identify the impact of wounds on the patient's life and their coping mechanisms to improve their daily experience.⁹ The goal is to find solutions that work for the individual before depression and stress spiral out of control. Clinicians should follow the steps below to provide mental health support to their patients with diabetes:

- Conduct screening.
- Communicate effectively.
- Recommend support programs.
- Initiate pharmacological management.
- Provide referrals.

1. CONDUCT SCREENING

Reflect on the following:

- What screening do you conduct in your present practice to assess the mental health of your patients living with diabetes and those living with foot complications?
- Audit your current clinical practice.
 - What issues and disorders do you currently screen for?
 - If you do screen, what happens with the results?

- To whom do you refer patients?
- Think about next steps.
- What could you do to improve your practice?
- If you want to introduce a screening tool into your practice/clinic, what team members would you involve?

Assessment Tools for Diabetes Distress

Screening for depression and diabetes distress with a validated tool is recommended as part of the clinical interview process.³ Assessment tools are available to screen for depression and diabetes distress (e.g., Problem Areas in Diabetes Scale, Diabetes Distress Scale; see Table 1).^{13,21} Once the assessment is completed, responses to questions can be used to open conversations with the patient and/or care partner.

2. COMMUNICATE EFFECTIVELY

Use motivational interviewing to enhance communication. Motivational interviewing is a method that adds structure and purpose to communication with patients and families. In motivational interviewing, "you know where you want to go, you are not just following" along.⁴

For a deeper look into motivational interviewing, readers are encouraged to investigate the OARS model, a skill-based approach that guides clinicians. Steinberg and Miller (2015)

Table 1: Screening and Assessment Tools (examples only; list not comprehensive)

Anxiety	<ul style="list-style-type: none"> • Hamilton Anxiety Rating Scale • Generalized Anxiety Disorder 7-item scale • Beck Anxiety Scale
Diabetes Distress for Patients	<ul style="list-style-type: none"> • Problem Areas in Diabetes Scale (PAID)²² • The Diabetes Distress Screening Scales <ul style="list-style-type: none"> • Persons with Type 2 Diabetes Mellitus • Persons with Type 1 Diabetes Mellitus <ul style="list-style-type: none"> • French version • Parents of Teens with Type 1 Diabetes
Diabetes Distress for Partners	<ul style="list-style-type: none"> • Diabetes Distress Scale for Partners of Adults with Type 1 Diabetes • French version
Depression	<ul style="list-style-type: none"> • Patient Health Questionnaire (PHQ-9) • Depression (Adults) (2-item Depression Screening Questionnaire) • Centre for Epidemiologic Studies Depression Scale (CESD-R) • Hospital Anxiety and Depression Scale (HADS)

Note: This list is not inclusive.

review the tenets of the mnemonic acronym **OARS** when working with patients with diabetes and related complications:⁴

- Asking **O**pen-ended questions
- Using **A**ffirmations
- **R**eflecting or active listening
- **S**ummarizing

3. RECOMMEND SUPPORT PROGRAMS

Provide referrals for well-being interventions to support optimism, positivity and improved health outcomes. Refer patients to programs that improve their lifestyle, enhance exercise and walking programs and provide positive reinforcement for their beneficial choices. The following are some areas to explore together:

Mindfulness

Mindfulness classes, guides and virtual (online) supports may be of benefit to patients and their families. Mindfulness has been shown to have an impact on a number of issues relating to diabetes.^{21–23} Some of the recognized benefits include reduction of or improvement in comorbid conditions such as anxiety and depression as well as in lowering risk of addiction or abuse. The following guides from Diabetes UK may be of interest to patients:

- Mindfulness and Hypoglycemia
- Mindfulness, Blood Glucose Levels and Blood Pressure
- Mindfulness and Sleep
- Mindfulness and Back Pain

Tip:

Fisher, in a recent interview, suggested the following for clinicians using the Diabetes Distress Scale:

“Give all patients the scale at each visit. Even if they don’t meet the pre-defined criteria for Diabetes Distress, the items in the scale can be a jumping-off point for beginning a brief conversation about how they are feeling about things. Often the patient will rate one or two items very highly, and that can become the beginning of a conversation. Again, it’s asking very simple questions, like ‘I noticed you indicated frustration about _____ [item or topic]. What might be going on?’¹⁵

Stress Management

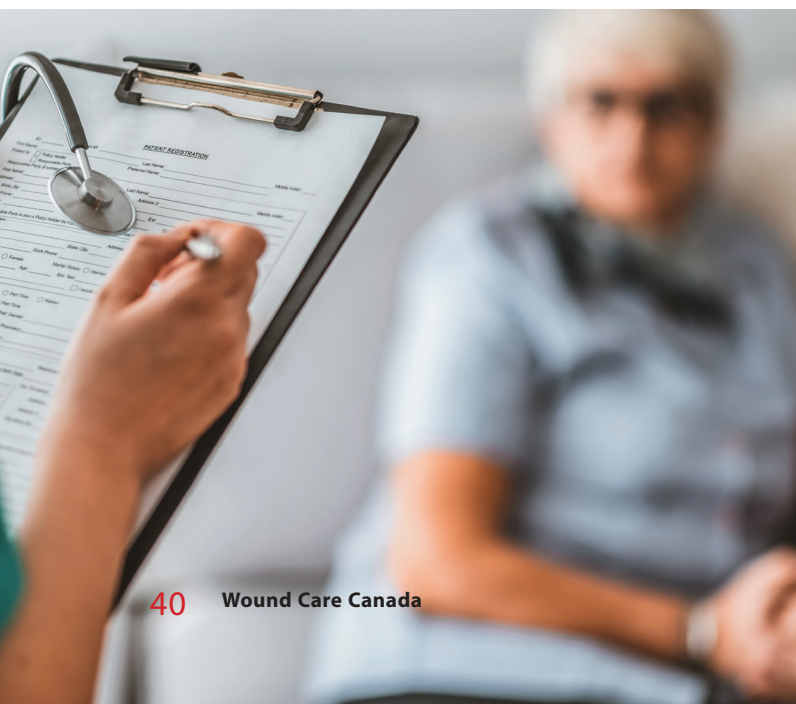
The impact of diabetes as a chronic disease with long-term and complex complications on an individual’s work, home, leisure and social life is a reality and can be significant. Coping mechanisms, including the implementation of stress management strategies, are important immediately upon diagnosis.⁷ Not only do these provide the patient with tools to manage their mental health, but discussions about stressors and factors that contribute to stress build trust between the care provider and the patient.²⁴

Life Management

For a person with diabetes to self-manage effectively over their lifetime, they need support with decision making in a number of areas, including nutrition, exercise and weight management.³ Along with their care partners, the patient and clinician need to work together to identify challenges and to determine goals that are reasonable, specific, measurable, achievable and realistic. As the patient puts solutions into play, those solutions should be evaluated and discussed. Successes should be celebrated and challenges revisited with alternative solutions if necessary.

Spiritual Care

Spiritual care is a term for a range of activities that can support an individual’s spiritual health



and wellness. Spirituality is “whatever or whoever gives ultimate meaning and purpose in one’s life that invites particular ways of being in the world in relation to others, oneself, and the universe.”²⁵

Spiritual care can relieve stress and allow the individual to feel inner peace, hope and optimism when negative health issues occur. It may assist the patient in feeling more engaged when making care decisions.²⁶ In two recent studies, spiritual health, hope and religious connectedness were identified as important elements of maintaining personal health when living with foot ulcers.²⁷⁻²⁸ Activities that create a space of peacefulness include prayer, faith-based activities and communication with spiritual leaders.

Peer Support Groups/Programs

Clinicians can help their patients find organizations and support groups/programs to help them reinforce positive self-management behaviours and decision-making. Wounds Canada’s **Diabetes, Healthy Feet and You** is one such program. This patient-driven self-management program focuses on assisting individuals with diabetes to identify the risks factors of diabetic foot ulcers, understand the impact of diabetes on foot health, learn appropriate foot self-care techniques, interact with peers, navigate their health-care system, share and give support, find the links to available community resources and make a commitment to change behaviour.²⁹ In 2013, Woodbury et al. investigated the role of peer co-facilitators in programs for patients living with diabetic foot complications. It was believed that involvement of peer leaders in the program provided social modelling and support to the participants.³⁰⁻³¹ The peer leaders facilitating the program shared their experiences of living with diabetes and preventing DFUs, thus motivating the participants to change their foot self-care behaviour.

Virtual Health Communities

There is a growing role for the use of social media/online communities that support the mental well-being of patients living with diabetes and diabetes-related complications. Young (2013) defined online communities as groups of people



with shared interests who form relationships and interact online.³² Participants may be motivated to learn from other community members who have similar lived experiences, encouraging strong relationships and providing emotional support.

4. INITIATE PHARMACOLOGICAL MANAGEMENT

Medication options are available for specific symptoms and psychiatric diagnoses. It is important to keep in mind that some drugs may have an effect on metabolic parameters such as weight, lipid profile and glycemic control. Drug interactions, too, need to be considered when patients with diabetes take multiple medications.

A comprehensive review of the effect of antidepressants on weight was done in 2010.³³ Prescribers should be aware of which drugs are more likely to cause weight gain. Examples of some psychiatric drugs that fall into the high-risk category for weight gain are mirtazapine, quetiapine, risperidone, valproate and nortriptyline. More weight-neutral medications include citalopram, escitalopram and fluoxetine.³ Patients requiring medication using antidepressants or antipsychotics should have metabolic parameters monitored.



5. PROVIDE REFERRALS

Effective referrals are possible when resources and health-care professionals are available to support patients with diabetes. Clinicians should gather a list of resources available in their region or virtually. These include expert health-care professionals, community programs, disease self-management programs and other online resources as appropriate. If the resources are virtual, provide a quiet space where a patient can count on confidentiality when receiving care. As well, if finances are a challenge, refer the patient to a social worker or other appropriate professional.

Summary

People with diabetes are at risk of experiencing mental health challenges. Strong relationships exist between certain mental health conditions as risk factors for the development of diabetic foot complications, including ulcerations, delayed wound healing and higher recurrence of foot ulcers. Frontline clinicians treating patients with diabetes need to be mindful of the associations and incorporate mitigation strategies into any plan of care. This approach must be based on early screening, strong communication with the patient and care team, the use of support programs, medication as appropriate and timely referrals. 📌

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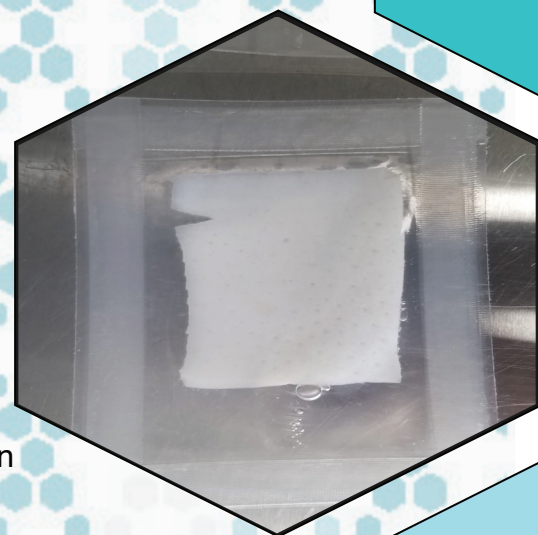
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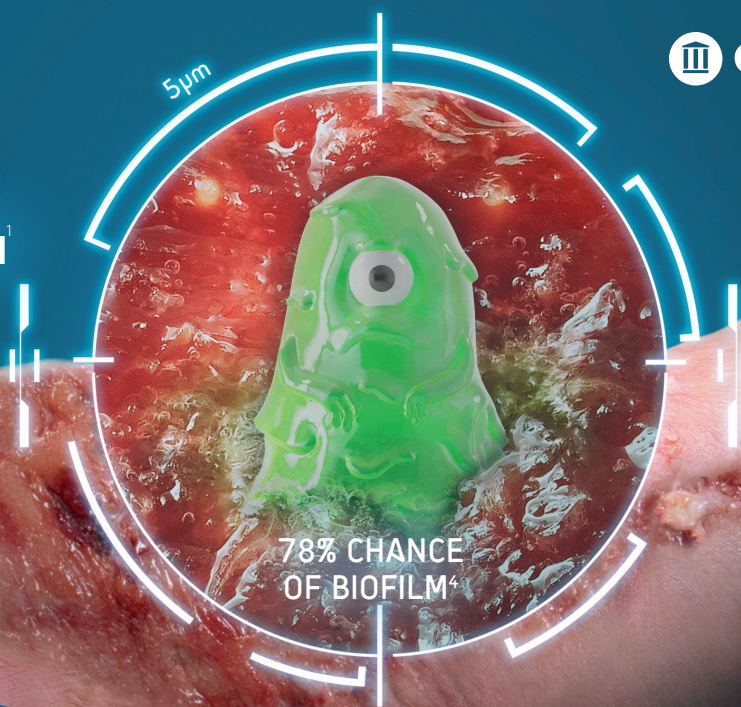


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Wound Sleuth

By Carol Ott, MD FRCPC
and Amanda Goldberg, MD FRCPC

Hematoma: Sometimes a Mild Bump Can Lead to Large Bruises

JR is an 86-year-old female who presented with a large hematoma on the anterior-lateral left leg (see Figure 1). She is wheelchair-bound due to cervical neuropathy and had bumped her leg on someone else's wheelchair. The injured area was 22 x 16 cm. Her past medical history included hypothyroidism, hypertension, osteoarthritis, bilateral leg lymphedema and obesity. Several months prior, she had a similar hematoma on the right leg requiring evacuation, currently healing. It too had occurred secondary to a mild traumatic injury.

Current medications:

- Acetylsalicylic acid (ASA) 81 mg daily
- Vitamin D3 1000 IU daily



Figure 1: Presentation

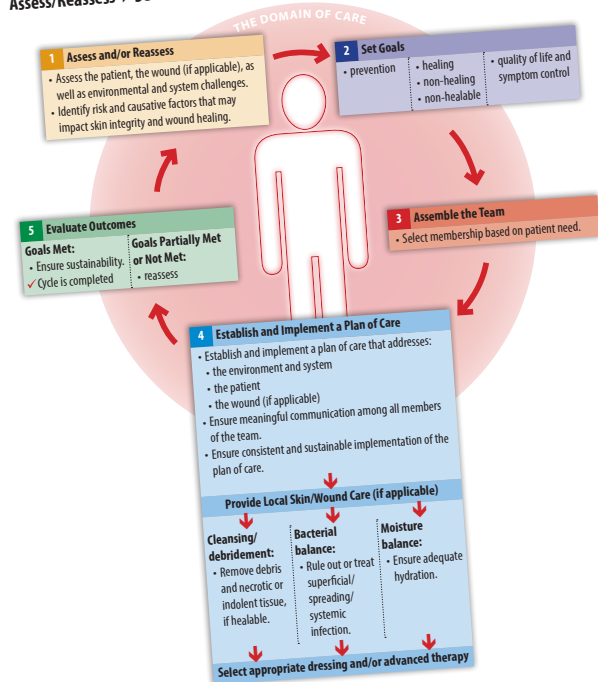
- Levothyroxine 50 ug daily
- Ferrous gluconate 300 mg daily

A hematoma is clotted blood that has accumulated outside a

blood vessel. It can occur due to injury to the wall of the blood vessel. The blood vessels damaged could be veins or arteries.¹ In the case of our patient, the

The Wound Prevention and Management Cycle

Assess/Reassess ► Set Goals ► Assemble Team ► Establish and Implement ► Evaluate



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Figure 2: The Wound Prevention and Management Cycle

hematoma was just under the skin. Hematomas can be deeper as well and not seen at the skin level. They can be caused by a variety of injuries to the blood vessels including falls, surgery and IV needle insertion.

Q Question 1: What medications could cause bleeding, and when should they be prescribed?

Q Question 2: How would you treat this injury?

A Answer 1: Antiplatelets and anticoagulants are commonly prescribed drugs and significantly increase the risk of bleeding.

Common antiplatelet agents include acetylsalicylic acid (ASA), clopidogrel and ticagrelor. These are typically used for patients who have experienced a heart attack or stroke, or who have coronary artery disease or peripheral arterial disease. There is well-established evidence that ASA is beneficial for secondary prevention.²⁻³ This means that for patients who have had a heart attack or stroke, an antiplatelet agent could prevent

another similar event from occurring.

ASA works by blocking the enzyme cyclo-oxygenase, leading to a decrease of thromboxane A₂, a potent stimulator of platelet aggregation and prostaglandins. The decrease in thromboxane A₂ leads to difficulty forming the platelet plug created during hemostasis.

ASA is often used for primary prevention in asymptomatic individuals to prevent cardiovascular disease, prescribed to patients who have not had a cardiovascular event but may be at risk of one. However, the most recent Canadian Stroke Best

Practices Recommendations advise *against* the use of ASA for primary prevention. A recent randomized controlled trial of 19,114 older adults showed that the use of aspirin for primary prevention was associated with higher all-cause mortality.² Side effects of taking ASA include increasing a person's tendency to bleed—often in the stomach, and rarely in brain—and decreasing protection of the stomach mucosa by inhibiting the prostaglandin cycle (see Table 1).³

Other antiplatelet agents such as clopidogrel and ticagrelor work by blocking the binding of adenosine phosphate to a specific receptor—P2Y₁₂. By blocking this pathway, platelet activation is inhibited, affecting aggregation of the platelets and also affecting hemostasis.

Anticoagulant agents include warfarin, heparin, and the newer direct oral anticoagulant agents (DOACs), which include apixaban, rivaroxaban, edoxaban, and dabigatran. These all work by affecting the coagulation cascade, decreasing the body's ability to form clots. Warfarin is a vitamin K antagonist, and heparin acts to indirectly bind to antithrombin. The newer agents—the DOACS—directly target the enzymatic activity of thrombin and factor Xa. These anticoagulants are typically prescribed to prevent stroke in people who have atrial fibrillation and to treat venous thromboembolic disease, which includes deep-vein thrombosis and pulmonary embolism. The

Canadian Cardiovascular Society recommends prescribing direct oral anticoagulants over warfarin for most patients with atrial fibrillation.⁴

A **Answer 2:** *Treating the Wound*

In treating the wound, we can refer to The Wound Prevention and Management Cycle (see Figure 2) as a guide to ensure we are covering all areas needed.

Step 1 – Assessment: We can see that these injuries were trauma-induced onto a leg with edema.

Step 2 – Goals of Care: We wanted to heal this wound as

well as prevent further ones. We evacuated the wound. We also discussed the need for ASA, compression and safety measures.

We knew this wound on her left leg should heal, as she had had other wounds previously that had healed. On Doppler ultrasound we observed biphasic waveform pedal pulses indicating that she had sufficient arterial flow. A physical exam also showed no signs of vascular disease. We had trialed compression in the past for lymphedema but were unsuccessful in finding something comfortable for her.

Step 3 –Team: We assembled a

team comprising nurses to perform daily care on the wound, an occupational therapist to evaluate her sitting situation and look for trauma-inducing issues, a physician willing to debride, and her family physician to discuss her anticoagulation needs. Personal support workers involved in her care were brought into the care circle to discuss other possibilities of how to prevent future trauma to her legs.

Step 4 – Plan of Care: Our plan of care was established, the hematoma was evacuated at the bedside, and within days



Figure 3: During debridement



Figure 4: Day after debridement



Figure 5: Two weeks after debridement



Figure 6: Two months after debridement, skin filling in

Key Points³

- ✓ Acetylsalicylic acid (ASA) is still strongly indicated for secondary prevention in patients who have had manifest cardiovascular, cerebrovascular or peripheral artery disease.
- ✓ ASA is no longer recommended for primary prevention in individuals without a history of symptomatic cardiovascular disease, stroke or peripheral artery disease; the harms of daily ASA use could potentially outweigh the benefits.
- ✓ These revised recommendations present an opportunity for increased focus on primary prevention through healthy lifestyle choices, lifestyle modification and management of vascular risk factors.
- ✓ The decision to start, stop or continue ASA therapy is individualized, and the decision-making process should be shared between health professionals and patients, weighing risks, benefits, values and preferences.
- ✓ Important questions remain, including benefits of ASA for younger high-risk patients, individuals with subclinical vascular disease and asymptomatic atherosclerosis, and outcomes in patients who cease taking ASA after long-term use for primary prevention.

the wound began to heal (see Figures 3 to 6).

Step 5 – Evaluate: At the two-month mark, we observed good healing, and have every reason to believe the wound will go on to full healing. Her previous injury on her right leg has healed.

Step 1 – Reassess: We will reassess the need for compression in the future; however, at this point, our occupational therapist was able to adjust the patient's wheelchair to increase leg elevation, which has been helpful in reducing edema.

Discussion

It is important to treat the cause of the injury and any reasons it may be slow to heal.

Both times our patient developed hematomas, we looked for underlying reasons that she had developed such large hematomas. She has several reasons for being at high risk for these. She is wheelchair-bound and unable to move her legs much. She has lymphedema and venous stasis in her legs but is unable to tolerate compression. She also takes ASA 81 mg daily.

As an antiplatelet agent, ASA will prevent the platelets from sticking together and forming a blood clot that stops the bleeding of a wound. So, once blood vessels in our patient's leg became damaged, her platelets

could not stick together, affecting her ability to clot.

Our patient has no recorded previous stroke, cardiac events or known peripheral arterial disease. Therefore, it would be reasonable to consider stopping the ASA, as it has not been shown to be beneficial in primary prevention. However, she has several family members who have had strokes and knows well the devastation they can bring. Even after discussion on how the side effects of the ASA include bleeding—which has occurred twice in her legs—possible stomach bleeding and rare intercranial bleeding, she has chosen to continue with the ASA at this time. We need to work on other ways to decrease the risk of injury to her legs. 🩹

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