SUMMER 2022
VOL.20 NO.1

Wound Care CANADA

THE OFFICIAL PUBLICATION OF WOUNDS CANADA

Dressing Selection Tips from the Experts

Focus on Patients:

When Physician Becomes Patient: Key Learnings

Autonomy, Empowerment and Self-management

Teams Need Patients as Partners

Unfolding Patient Preferences

Eating Well for Wound Healing:

A Patient Resource

Pressure Injury Prevention: A Guide for Providers and Patients

The Importance of Timely Interventions

Test Your Knowledge: Wound Sleuth

WoundsCANADA.ca

Treating wounds takes **time.**

ALLEVYN LIFE **gives it back.**

Smith+Nephew

ALLEVYN◊ LIFE
Foam Dressing

Only ALLEVYN LIFE dressings have the EXUMASK◊ Change Indicator, so you and your patients know when a change may be necessary.

Save time. Save cost. Save worry. Scan to learn more.[1]

1. Tiscar-Gonzalez V, Rodriguez MJM, Rabadan Sainz C, et al. Clinical and economic impact of wound care using a polyurethane foam multi-layer dressing versus standard dressings on delayed healing ulcers. Adv Skin Wound Care. 2021;34(1):23–30

Advanced Wound Management Smith & Nephew Inc. | 2280 Argentia Road , Mississauga, Ontario, Canada. L5N 6H8 | www.smith-nephew.com | T 1-800-463-7439 | F 1-800-671-9140

Contents

Wound Care Canada

Volume 20, Number 1 · Summer 2022
ISSN 1708-6884

Editor Sue Rosenthal

Editorial Assistant Sowmya Karem

Art Director Robert Ketchen
wccproduction@woundscanada.ca

Advertising Sales
416-485-2292 · info@woundscanada.ca

Wound Care Canada is published by Wounds Canada (Canadian Association of Wound Care). Canada's first publication devoted entirely to wound care, *Wound Care Canada* addresses the needs of clinicians, patients, care partners and industry.

All editorial material published in *Wound Care Canada* represents the opinions of the writers and not necessarily those of Wounds Canada.

Discussions, views and recommendations as to medical procedures, choice of treatments, dosage or other medically specific matters are the responsibility of the writers. No responsibility is assumed by the publisher or publishing partners for any information, advice, errors or omissions contained herein.

The inclusion of advertising and sponsored material in *Wound Care Canada* does not constitute a guarantee or endorsement of any kind by Wounds Canada.

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.

Don't Miss Out

Each time a new issue becomes available, subscribers will be notified by an email that contains a live link to the online magazine. If you are not already a subscriber, get on the list by sending an email to info@woundscanada.ca.

It's free!

News in Wound Care

Events

#WoundsCanada2022 Limb Preservation Symposium

Thanks to the delegates, speakers, sponsors, scientific planning committee and Chair Ahmed Kayssi for making our Limb Preservation Symposium a huge success! Despite the many challenges experienced by health-care providers during this current pandemic wave, we were impressed that many participants still turned out to learn, listen and collaborate on May 6.

"Thank you for letting me be part of this. I am amazed at the information, the knowledge and the integration of different disciplines that are part of this."

"Thank you for this informative symposium. The moderators did an impeccable job today!"

"Well done. I enjoyed the level and scope of research and depth content."

97% of respondents agreed that the symposium was excellent! Our fully virtual conference platform provided innovative ways for participants to network, win prizes through a trivia quiz and other fun challenges, and review the latest technology and products in the exhibit hall.

We were very pleased to see delegates take advantage of our photo booth to snap their #SaveThe4 pics for #FootHealthAwarenessMonth (more on that in the Awareness and Advocacy on page 6).

Missed a session or feeling the urge for a rewatch? The sessions are now available on-demand on the conference platform for registrants!

"Our Voices, Our Stories" Patient Journey Conference

Our first-ever "Our Voices, Our Stories" Patient Journey Conference took place June 9–10. Wounds Canada believes centring the voice of the patient is crucial to effecting change in health-care systems and delivering the best possible wound care.

Conference participants heard from patients and care partners as well as health-care providers, while being encouraged to share their own voices and collaborate on the future of wound care and patient advocacy. This unique (and free) two-day learning, outreach and knowledge exchange event was held in partnership with Idevania Costa, Catherine Phillips and Michelle Spadoni of Lakehead University, and Pilar Camargo-Plazas of Queen's University.

Some of the highlights from the event included:

- Keynote Address on The Power of the Patient's Voice and Stories with Pip Hardy, world-renowned advocate for patient storytelling, and Lana Ray, Lakehead University's inaugural Indigenous Research Chair in Decolonial Futures
- Exploring the Social Determinants of Health Through Art-based Approaches with Pilar Camargo-Plazas

- Four patient story sessions that highlighted the unique perspectives of patients navigating social life while living with their wounds
- Linda Moss' gripping story of advocating to be heard as a care partner for a family member with a pressure injury
- Two sessions focused on the Indigenous experience, with an eye to decolonizing the delivery of wound care
- Highly skilled moderators, who guided the sessions, offered check-ins to discuss emerging themes and encouraged collaboration from participants, as well as leading closing panel discussions at the end of each day

We gratefully acknowledge the funding support of the Social Sciences and Humanities Research Council (SSHRC).

2022 National Conference Line-up

The Wounds Canada team is already hard at work on the planning and implementation of two more highly anticipated conferences in 2022:

- Hybrid (virtual and live) National Fall Conference with co-chairs Robyn Evans, Virginie Blanchette and Marlene Varga – October 14–16, 2022
- Virtual Pressure Injury Symposium – November 17, 2022

Head over to our conference platform to register today!

Wounds Canada Institute

We continue to establish the Wounds Canada Institute as a trusted deliverer of competency-based accredited education for health-care professionals and other unregulated professionals. Our SHARP (Skin Health Advocate and Resource Professional) Super Program #1 covers the full spectrum of skin health and is an excellent educational opportunity for health-care professionals to acquire proficiency in wound prevention and management. The program includes 23 interactive modules, eight synchronous webinars, two robust outcome measures and access to a discussion forum with the program faculty.

We're also proud of our Programs for Unregulated Care Providers, which is designed to meet the learning needs of unregulated care providers, such as personal support workers, health-care aides, home support workers, personal care attendants and even family members caring for a loved one.

Live Skills Labs

Our popular Wounds Canada Institute skills labs are back! Enhance your wound assessment and treatment skills by participating in the full-day, in-person educational event we have planned for fall 2022: Skills Lab for Local Wound Care (BPWD01S) for completion of Best Practice Approach to Skin Health and Wound Management: Knowledge and Skills (A100NWS) program. It's happening on October 13 at the Sheraton Centre Toronto Hotel in Toronto. Register now to ensure your spot!

Research

Research is a key pillar of Wounds Canada, and we're pleased to have the opportunity to continue to drive change through three new research projects in 2022:

How COVID-19 Affected Individuals Living with Pressure Injuries and/or Spinal Cord Injury and Their Care Partners

This project, led by Janet Kuhnke of Cape Breton University, is a joint collaboration between Spinal Cord Ontario and Wounds Canada. The purpose

Are you a health-care provider who works with individuals living with a pressure injury and/or spinal cord injury? Please encourage them to participate in our survey about how COVID-19 affected them and their care partners in accessing skin and wound care services. Click here to participate: https://woundscanada.hostedincanadasurveys.ca/793378?lang=en.

of this research is to understand the experiences and learn from three groups:

- Individuals living with a pressure injury
- Individuals living with a pressure injury and a spinal cord injury (SCI)
- Care partners and family members caring for individuals with pressure injuries

Interprofessional Wound Care Team Competency Framework

Lead investigator Virginie Blanchette, from Université du Québec at Trois-Rivières, has been working with wound care experts who are providing their input into the development of an Interprofessional Wound Care Team Competency Framework based on CanMEDS Roles (e.g., expert, collaborator, communicator, health advocate, leader, professional, scholar).

Identifying Canadian Research Wound Care Priorities

This project is led by Ahmed Kayssi, vascular surgeon at Sunnybrook Health Sciences Centre and wound care physician at Women's College Hospital.

Awareness and Advocacy

At Wounds Canada, we know raising awareness and providing knowledge are the first steps in driving and supporting system-wide and sustainable change. Our mission is to urge governments across Canada to make wound prevention and management a priority amid the long-term care crisis, health-care provider burnout and multiple waves of the COVID-19 pandemic. As part of this effort we provide a quarterly government newsletter to decision makers across the country, which you are encouraged to read as well.

#FootHealthAwarenessMonth

Thanks to everyone who participated in our #FootHealthAwareness campaign during the month of May. The Wounds Canada team put together a communications toolkit with everything from suggested social media posts and customized Instagram stickers to downloadable awareness posters and infographics to help board members, volunteers, policy makers, organizations, health-care providers, patients and care partners #SaveThe4 and #ActAgainstAmputation. We were pleased to have a diverse range of participants for our #SaveThe4 campaign, in which participants were encouraged to take a selfie holding up four fingers to represent the number of amputations (out of every five that occur) that are preventable, and happy to see organizations and individuals from many regions across the country partake in the campaign. See you next year!

Foot Health Awareness Month Allstars: The Diabetes Care Service at Health Sciences North

The Diabetes Care Service (DCS) at Health Sciences North (HSN) hospital enjoyed bringing attention to Wounds Canada's May #FootHealthAwarenessMonth and #SaveThe4 campaigns all month long.

They kicked off the beginning of May with help from clerical and registration staff, who decorated the

June: Wound Healing Month

June was Wound Healing Month, and Wounds Canada promoted awareness in tandem with our Patient Journey Program, with a strong emphasis on #PatientAdvocacy and #PatientStories through the sharing of patient story videos we've been compiling all year. We promoted our numerous #WoundHealing resources and arranged for special lighting at Niagara Falls and the CN Tower in Toronto. We wanted to reach the widest audience possible with our message, so why not enlist the help of two of Canada's biggest tourist attractions?

waiting room by displaying #SaveThe4 posters, footprint cut-outs and Wounds Canada's Diabetes, Healthy Feet and You pamphlets. Footprint stickers were created and given to patients and stuck on clinician office doors.

Every week there was something new for the DCS team members to participate in. Mondays began with Foot Tips or Tricks the DCS team could share with patients and colleagues. Four Foot Contests (four out of the five weeks in May) were held on Tuesdays. The Foot Contests included games such as guessing how many sour blue raspberry Big Foot candies there were from sweet red raspberry Big Foot candies in a jar. The winner, Jennifer Hancock, RN and Diabetes Educator, found a second way the candies could be used: to treat patients having a hypoglycemic event. Other games included emails where the participants had to email the best or most correct response to questions like, "What is a chiropodist's favourite flower, game or food?" Each Foot Contest went until Thursday when the answers were revealed. The winners received foot-, feet- or toe-inspired prizes such as a bottle of wine with a logo of a foot on it, elastic laces or a foot care/pedicure kit. Deanna Falvo, DCh, provided a "foot funny" or "corny" joke every Wednesday. Fridays were designated as Foot Fact Fridays.

On Tuesday May 10, the DCS team raised a shoe, stood on one leg, displayed their toes or flashed their four fingers for a photo. The team's goal was to bring awareness to the whole HSN organization. The team was successful when on Friday May 20, Communications posted their efforts on HSN's Instagram, Facebook page and home page.

Management got into the foot action and supported four DCS team members in attending the Diabetes, Healthy Feet and You Train the Trainer program for the virtual and in-person community program on May 24 and 25. To wrap up the month on May 31, the DCS team rewarded themselves by going out for mojitos (Get it? Mo-he-toes).

Way to go, DCS team and HSN, for your efforts to save four out of the five preventable diabetic limb amputations in May Foot Health Awareness Month!

Scholarships and Grants

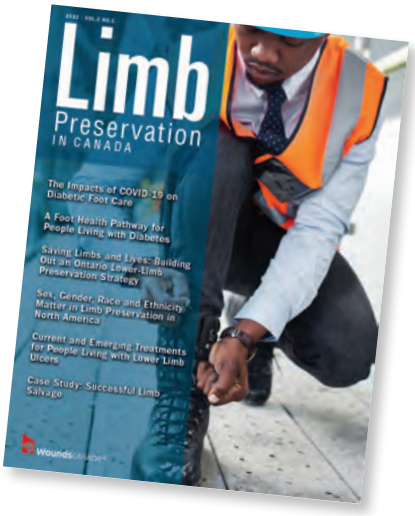
Our scholarship and grant programs contribute to advancing research in the field of wound care and prevention while also helping build a strong and vibrant wound care community in Canada. We're pleased to be currently accepting research grant applications for the Wounds Canada Open Grant until August 15, 2022. We are accepting applications for the following scholarships until August 15, 2022:

- SHARP (SUPER Program #1) Scholarship
- Scholarship for Unregulated Care Providers

Please donate to the Wounds Canada Foundation if you are able. Through your generous donation, the Wounds Canada Foundation will be able to continue to offer grants and scholarships as well as help bring prevention and awareness of wounds to the forefront of care.

WoundsCANADA Foundation

New Issue of *Limb Preservation in Canada* Out Now



Our new issue of Limb Preservation in Canada contains a range of informative and well-researched articles from an exciting line-up of wound experts. We're especially proud of the article on our new Foot Health Pathway for People Living with Diabetes.

Primary Care Newsletter

Are you a primary care provider? Read the latest primary care provider newsletter here.

Stay connected!

Get on the Wounds Canada mailing list!

To receive notifications, information, invitations and more, send an email to info@woundscanada.ca.

Follow us on social media!

Wounds Canada:

Facebook: www.facebook.com/woundscanada
Twitter: @woundscanada
YouTube: www.youtube.com/channel/
Instagram: @woundscanada
LinkedIn: www.linkedin.com/company/woundscanada/

Cutimed®

Advanced Wound Care Solutions for Positive Care Outcomes

In Medical Solutions, Essity provides innovative, high quality medical products for advanced wound care with leading brand Cutimed®.

Developed specifically for management of chronic and complex wounds, Cutimed® provides reliable and innovative product solutions that promote wound healing for all stages of chronic and complex wounds.

Cutimed® Siltec®

Silicone foam dressing utilizing hydrophobic microbe-binding layer for excellent fluid and infection management.

Cutimed® Sorbact®

Infection management for chronic wounds utilizing a purely physical mode of action.

Cutimed® DebriClean

Fast and effective wound cleansing.

Cutimed® Sorbion®

Super absorbent dressing that also manages bacteria.

For more information, contact us at 1-877-978-5526 | essity.com

Cutimed® an Essity brand

essity

News from Our Industry Partners

3M

3M focuses on providing better care through patient-centred science. From wound and skin care to solutions for BSI and SSI risk reduction, our team is ready to partner with you to help transform patient outcomes.

3M Science. Applied to Life.™

Medical | Health care | 3M Canada

ConvaTec

Improving the Lives of the People We Touch

ConvaTec is a global medical products and technologies company, with leading market positions in wound therapeutics, ostomy care, continence and critical care, and infusion devices. Our products provide a range of clinical and economic benefits, including infection prevention, protection of at-risk skin, improved patient outcomes and reduced total cost of care. ConvaTec has more than 9,500 employees, and we do business in more than 110 countries.

convatec
— forever caring —
toujours là pour vous

Nous existons pour améliorer la vie des gens dont nous prenons soin

ConvaTec est une entreprise mondiale de technologies et produits médicaux chef de file dans les soins des stomies, les soins des plaies, les soins de l'incontinence, les soins de phase critique, et les dispositifs de perfusion. Nos produits offrent une gamme d'avantages cliniques et économiques, y compris la prévention des infections, la protection de la peau, l'amélioration des résultats pour les patients et la diminution de coût total des soins. ConvaTec compte plus de 9 500 employés et nous faisons des affaires dans plus de 110 pays.

https://www.convatec.ca

Hydrofera

Hydrofera® produces a unique line of non-cytotoxic antibacterial wound dressings utilizing its proprietary PVA and PU foam technology. From onset to outcome, the Hydrofera Blue® suite of dressings power-

Hydrofera®

fully tackles any type of chronic or non-healing wound, with each dressing designed to shorten healing times, lower treatment costs and deliver better patient outcomes.

Hydrofera Blue manages ALL 4 factors of local wound care (DIME):

- Debrides and Disrupts biofilm
- Infection and Inflammation
- Moisture
- Edge Effect

The NEW Hydrofera Blue READY-Border® dressing provides the perfect option for atraumatic dressing changes. It's different. It's non-cytotoxic and has no silicone interface over the foam pad, allowing for intimate contact of the foam to the wound bed, which facilitates uninterrupted exudate absorption. The gentle contact of foam, with its natural healing and protective properties, provides an added measure of safety to help prevent infection and aid in the healing process. The NEW Hydrofera Blue READY®-Transfer does just that—it absorbs bacteria-laden exudate into the dressings where the bacteria are effectively killed, then transfers the exudate out and away from the wound. The Transfer dressing is ideal over VLUs, under TCCs and compression and between digits and toes.

Try the Hydrofera Blue CLASSIC® Heavy Drainage with NPWT and the regular CLASSIC under disposable NPWT. Hydrofera Blue® can be applied over bone and tendon, in tunnels and undermining while providing added wicking, antibacterial protection, and can help flatten rolled wound edges.

To request samples of Hydrofera Blue® products, email daniel@hydrof.com.

www.hydrofera.com

Integra LifeSciences

Integra LifeSciences, a global leader in medical technology, is dedicated to limiting uncertainty for clinicians so they can concentrate on providing the best patient care. Integra offers innovative solutions in advanced wound care, regenerative technologies, neurosurgery and specialty surgical, saving and sustaining lives around the world.

Integra is focused on research and innovation for the management of acute and chronic wounds and burns. We provide a comprehensive suite of evidence-based products designed to support patients' natural restorative healing process and clinicians' goals of healing wounds efficiently and effectively at every stage of the wound-healing process. We strive to provide quality solutions to achieve the highest level of customer satisfaction.

Integra's Advanced Wound Care portfolio includes MediHoney®, the global leading medical-grade honey-based product line for the management of wounds and burns and TCC-EZ® Total Contact Cast System, which offers a one-piece, roll-on, lightweight, woven design that is faster and easier than traditional systems. TCC-EZ's ease of application can lead to fewer complications.

For the latest news and information about Integra and its brands, please visit www.integralife.com/ca.

https://www.integralife.com/ca/outpatient-clinic-private-office/category/wound-reconstruction-care-outpatient-clinic-private-office

Medline Canada

Discover the Skin Health Solution from Medline, a holistic approach to skin and wound care.

Our goal is to drive change and empower caregivers to prevent skin breakdown and health-care-acquired skin injuries. Created for clinicians by clinicians, Medline's Skin Health Solution is a comprehensive offering, focused on people, process and products.

Together, we build a customized solution to fit your organization's needs, from expert guidance on evidence-based best practices and product utilization to caregiver education.

Request a Discovery Assessment to find your Skin Health Solution by contacting your Medline Representative today.

https://www.medline.ca/

Medtronic

Bold thinking. Bolder actions. We are Medtronic. We lead global health-care technology and boldly attack the most challenging health problems facing humanity by searching out and finding solutions. Our Mission—to alleviate pain, restore health and extend life—unites a global team of 90,000+ passionate people. Powered by our diverse knowledge, insatiable curiosity and desire to help all those who need it, we deliver innovative technologies that transform the lives of two people every second, every hour, every day. Expect more from us as we empower insight-driven care, experiences that put people first, and better outcomes for our world.

In everything we do, we are engineering the extraordinary.

www.medtronic.ca

Mölnlycke

World-Leading Medical Solutions Company with a Swedish Heritage

Around the world, health-care systems and professionals are under pressure to deliver better care, to more people, for better value. They need innovative solutions they can trust. That's where we come in. We're here to advance performance in health care. So we're always on the lookout for new ways to improve. Our focus: providing effective solutions and offering better value for money.

We have one purpose—to advance performance in health care across the world—so that health-care professionals have what they need to achieve the best clinical, patient and financial outcomes.

But different health-care professionals have different needs. So we start by listening and making sure we understand them. Then we create solutions that are right for them and for their patients, and that are supported by evidence.

We contribute to advancing performance in other ways too: by sharing knowledge about our specialist clinical areas, and by helping to shape health-care policies and protocols to raise standards of care worldwide.

We have a strong commitment to health-care professionals. And we're proving it every day.

Although we're a global company our headquarters are still in Gothenburg, just a short distance from the town of Mölnlycke (pronounced *Mon-licka*), the place where the company was founded in 1849 and the origin of the Mölnlycke name.

Visit us at: www.molnlycke.ca/education

Urgo Medical North America

Better healing—and living unhindered by wounds—is within reach for patients. Urgo Medical North America empowers and equips clinicians to make a difference in their patients' lives by providing innovative, proven wound care solutions that minimize the pain and burden of wounds, help more patients heal and close their wounds sooner. After establishing UrgoTul Ag as a first-class dressing for infected wounds, Urgo is now bringing two unique technologies to the Canadian market: Vashe Wound Solution to cleanse all your wounds and the interactive dressing UrgoStart Plus to reduce the burden of chronic wounds (diabetic foot ulcers, leg ulcers and pressure injuries).

https://urgomedical.us/

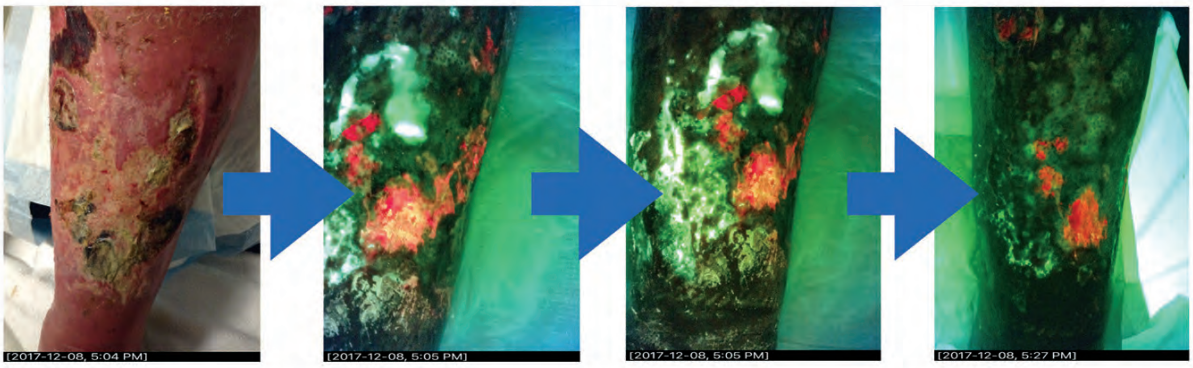
anasept®

ANTIMICROBIAL SKIN AND WOUND CLEANSER

Management

The use of Anasept® Antimicrobial Skin & Wound Cleanser in the reduction of wound bioburden and elimination of certain bacterial species is confirmed by bacterial fluorescence.

Fluorescence Images



Standard Image

Baseline Fluorescent Images

Post Saline Cleanse

Post Modified Sodium Hypochlorite Cleanse

(Anasept® Antimicrobial Skin & Wound Cleanser)

LIONS GATE HOSPITAL FOUNDATION

Excerpted from

"Shifting Focus: Implications of Periwound Bacterial Load on Wound Hygiene"

By Rosemary Hill BSN CWOCN WOCC (C) and Joshua Douglas MD, FRCPC, ABIM Infectious Disease and Critical Care Internal Medicine, Vancouver Coastal Health

Vancouver CoastalHealth
Promoting wellness. Ensuring care.

Cura Surgical™
AN ARGENTUM MEDICAL COMPANY

To learn more about Cura Surgical, visit www.curasurgical.com or call 888.551.0188.

The Voices of Skin and Wound Care Clinicians During the First Year of COVID-19

Summary of the Research to Date

By Janet L. Kuhnke, RN BScN MS NSWOC DrPsych and Sandra Jack-Malik PhD

First, we would like to thank clinicians across Canada for supporting this research project. We are grateful for your commitment to prevention, treatment and management of skin and wound care issues.

The overall research aimed to understand how the delivery of skin and wound care changed during the pandemic. The study included feedback from nurses, dietitians, occupational therapists, physiotherapists, physicians, chiropodists, podiatrists and other types of wound clinicians. The study was approved by the Research Ethics Board at Cape Breton University.

Participants were asked if and how they adapted delivery of patient-centred wound care services during the pandemic, with the aim of providing practical evidence to Wounds Canada as it continues to support clinicians through educational activities and the delivery of informational resources.

How: Participants were asked to complete structured, semi-structured and open-ended questions using a qualitative online survey methodology. Participants responded from across Canada.

Who: Individuals in the Wounds Canada database were sent a link to the survey via email. They read a Letter of Information and completed an Informed Consent form before completing the survey.

Participants were individuals who:

- deliver wound care services
- are a regulated or unregulated health-care provider
- were willing to complete an online survey

When: The study had a multiphase data collection timeline. Over 18 months, five surveys were distributed between May 2020 and January 2022. We compared, contrasted and analyzed the data for themes. To date, two articles have been published on this analysis and are summarized below:

Early COVID-19 and the experiences of Canadian wound care clinicians: Preliminary findings

Kuhnke JL, Jack-Malik S, Botros M, Rosenthal S, McCallum C, Bassett, K, Wounds International. 2021;12(2):14-19. Available from: https://www.woundsinternational.com/resources/details/early-covid-19-and-experiences-canadian-wound-care-clinicians-preliminary-findings

The preliminary data discussed in this article were part of the larger qualitative study designed to explore the experiences and learnings of front-line wound care clinicians in Canada during the COVID-19 pandemic. Questions in the survey focused on how the delivery of wound care services were influenced during the early months of COVID-19. The survey used a Likert Scale, with the option to provide additional details. Participant responses varied and were represented by five overarching themes:

1. Increased use of virtual-care technology during the pandemic
2. Unequal clinician access to, and expertise using, virtual care technology
3. Unequal patient access to, and expertise using, virtual care technology
4. Increased clinician flexibility
5. Lack of skin and wound education

This research is significant in its description of the limitations and challenges health-care providers faced when providing care during a pandemic. The data-collection process offered an outlet for clinicians to share their experiences and have their voices heard. It also identified possibilities for the provision of consistent and high-quality wound care during a pandemic. Furthermore, the data highlight some of the issues faced by clinicians and patients/families when technology is required as part of receiving care. These data could be used to develop new, or modify existing, professional development opportunities.

Creating and sustaining work–life balance while providing skin and wound care 6 months into a global pandemic: Second survey findings

Kuhnke JL, Jack-Malik S, Botros M, Rosenthal S. Wounds International. 2022;13(1):20-28. Available from: https://www.woundsinternational.com/journals/issue/656/article-details/creating-and-sustaining-work-life-balance-while-providing-skin-and-wound-care-6-months-into-a-global-pandemic-second-survey-findings

This second article highlighted results from data gathered during the second of the five surveys, which was emailed to clinicians in September 2020.

Three themes emerged from the responses to the second survey:

1. Clinician perspectives: working conditions and work-life balance
2. Location-specific policies and their impacts within hospitals, long-term care facilities and community home care
3. Technology as an asset and/or barrier

Findings from the first survey allowed us to appreciate some of the complexities of the pandemic, including far-reaching influences on health-care professionals' efforts to deliver skin and wound care services to patients. In survey two, we also began to understand how the pandemic was influencing home lives and work-life balance. In particular, health-care workers described the challenges while attending to the wellbeing of themselves, their patients and vulnerable family members.

This article provides an overview of the impact of this dynamic reality on the ability of health-care professionals to deliver care to patients as well as the consequences on psychological health, professional confidence, educational development and, importantly, work-life balance.

Next Steps

A third set of results have been received and the results are being analyzed. Our goal is to have the third and final article ready by fall 2022.

Effective exudate control.

Contrôle efficace de l'exsudat.

Biatain® Fiber

Biatain Fiber with HexaLock Technology

The unique HexaLock Technology integrates gelling fibers in a reinforced hexagon net, ensuring minimal shrinkage and minimising the risk of gap creation and exudate pooling.

Locks in exudate to reduce exudate pooling and thereby minimise the risk of infection and maceration

Minimal shrinkage to minimise risk of gap creation and exudate pooling

Cohesive gel for easy removal and minimal risk of leaving residues behind

L'unique technologie HexaLock intègre des fibres gélifiantes dans un filet hexagonal renforcé, assurant un rétrécissement minimal et diminuant le risque de création d'espaces et d'accumulation de l'exsudat.

Emprisonne l'exsudat pour réduire l'accumulation de l'exsudat et ainsi diminuer le risque d'infection et de macération

Rétrécissement minimal pour réduire le risque de création d'espaces et d'accumulation d'exsudat.

Gel cohésif pour un retrait facile et un risque minimal de laisser des résidus derrière

HexaLock® Technology

To learn more, please visit
https://www.coloplast.ca/Wound/Wound/biatain-fiber/

Learn more about Biatain Fiber
Scan the QR code

Pour en savoir plus, veuillez visiter
https://www.coloplast.ca/fr-CA/Plaie/Plaie/biatain-fiber/

En savoir plus sur la Biatain Fiber
Scannez le code QR

Ostomy Care / Continence Care / Wound & Skin Care / Interventional Urology
Soins de stomie / Soins d'incontinence / Soins des plaies et de la peau / Chirurgie urologique

Coloplast Corp. Oakville, ON L6H 5S9 / 1-888-880-8605
www.coloplast.ca

Coloplast

PM-20122
3.22

So Many Options, So Little Time:

Dressing Selection Tips from the Experts

Speakers: Amit Gefen, PhD; R. Gary Sibbald, MD FRCPC; Kevin Woo, PhD RN NSWOC WOCC

A session summary from Wounds Canada's 2021 National Fall Conference

Engineering Principles Underlying the Clinical Efficacy of Wound Dressings

One of the primary roles of wound dressings is managing exudate, a serum-based fluid that is secreted from a wound as part of the inflammation process. Exudate contains proteins, nutrients, inflammatory mediators, digestive enzymes, growth factors, waste products, cells (e.g., neutrophils, macrophages) and platelets, and sometimes bacteria and fungi. The exact make-up of exudate is dependent on the wound etiology, infection status and stage of healing.

Wounds must be moist; not too wet and not too dry. Moisture is critical for:

- Preventing the wound from drying out
- Supporting migration of tissue-repairing cells
- Diffusing nutrients to cells
- Diffusing inflammatory mediators (e.g., histamine)
- Diffusing growth factors (e.g., for angiogenesis)
- Transporting signaling molecules between cells for cell-cell communication
- Allowing immune cell migration to reduce bacterial burden
- Allowing tissue-repairing cell migration, i.e., fibroblasts, which synthesize collagen for wound closure

Excess exudate can be harmful. Having too much exudate can degrade the wound via several different damage pathways. For example, if the wound is infected, exudate is a carrier of pathogens within and outside the wound. If a non-healing wound has excess exudate, there likely is a high concentration of proteolytic enzymes, which compromise granulation tissue formation. Excess exudate can also cause softening and weakening of the periwound stratum corneum and dissolving of dermal collagen crosslinks. Decelerated migration of tissue-repairing cells from the wound edges (e.g., fibroblasts and keratinocytes) can also be caused by excessive exudate and the hos-

tile environment that it induces for these cells. Overall, these issues slow the rates of healing and decrease the extent and rate of wound closure, and may even enlarge the wound.

Requirements of Clinically Effective Wound Dressings

Effective wound dressings ensure appropriate moisture balance in the wound by absorbing and retaining excess exudate, maintain normal physiological skin and subdermal temperatures (including in nearby, undamaged tissue), and are impermeable to external fluids and pathogens while still allowing gas exchange. Dressings should mechanically protect the wound and the periwound, and should not disintegrate and must not leave any microscopic or macroscopic (i.e., visually recognized) debris in the wound bed—particularly during dressing changes when the dressing is subjected to pull-out forces—as this will likely cause chronic inflammation, thereby critically delaying tissue repair and healing. Dressings must be able to handle exudates of different pH and viscosities.

The Structure-Function Principle

In materials science and engineering, the structure-function principle is the idea that microstructure determines properties. For wound dressings, "function" encompasses mechanical, thermal, fluid transport and retention properties, which altogether form metrics of physical and engineering quantitative performance parameters. It is important to remember that physical and engineering characteristics of wound dressings belonging to the same family of products, such as gelling fibre dressings, may differ across manufacturers, and this micro-structure affects the mass transfer and mechanical properties and, ultimately, the functions and clinical performance of the dressings. For example, commercial gelling fibre wound

dressing products, produced by different manufacturers and tested in robotic wound systems in a bioengineering laboratory, exhibited remarkably different fluid handling and stay-intact performance metrics for simulated use sessions in wound systems of a sacral pressure injury and a diabetic foot ulcer.[1]

Physical Characteristics: Material Density and Porosity

In addition to the density of a dressing material, connectivity between pores in the micro-structure is crucial. For example, closed-cell foam structures (having unconnected pore spaces) are not good for dressings, as they cannot hold or transfer fluids. Good capillary action (sorptivity) is required for transferring exudate from a primary to a secondary dressing, or from the wound-facing surface of a dressing to its external surface, from which fluids can evaporate to the environment and thereby clear the dressing reservoir for additional inflowing exudate.[2]

Physical Characteristics: Permeability

Permeability is another critical aspect for the effective function of wound dressings. Permeability depends on porosity (size and shape) and on connectivity. This property determines the flow rate of exudate with a given viscosity at a certain wound temperature through the dressings, which directly impacts the timing and frequency of dressing changes. This, in turn, translates to clinician time and cost-effectiveness.

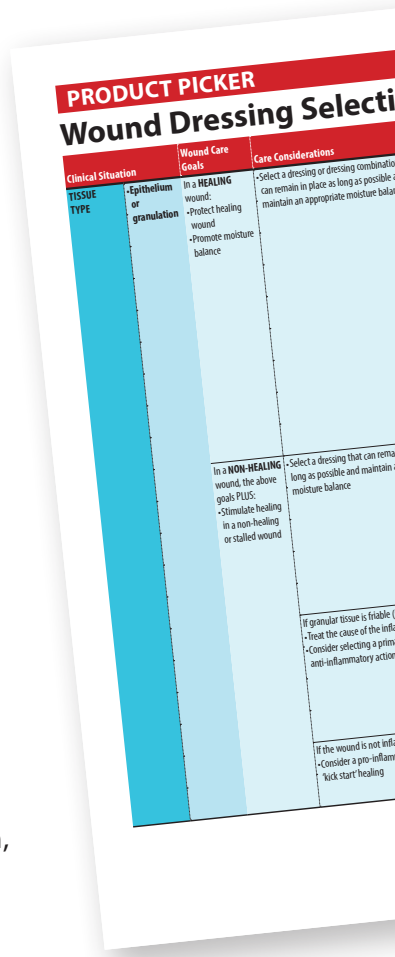
Biofilm

Up to 70% of non-healing wounds may have biofilm. Debridement is key for removing established biofilm. A topical antibacterial dressing should be used immediately after debridement to prevent the biofilm from re-forming. Use of an antibacterial dressing may prevent biofilm formation from occurring.

Patient Preferences: Are we meeting their expectations?

Wounds have a major impact on patient quality of life and, therefore, dressing selection must take into account the patient's lifestyle, priorities and goals. Key stressors encountered by people living with non-healing wounds might include wound-related symptoms (e.g., pain, odour, bleeding, exudate), changes to functional status and mobility, changes to emotional and psychological state, negative self-image, financial burden and burden on social relationships. Patients with wounds report high levels of anxiety, frustration, fear and loneliness, as well as depression and difficulty sleeping.

Unfortunately, very little research has been done into what patients prefer when considering different wound dressings. Pain has been identified as a significant predictor of non-concordance with compression bandaging; other concerns include excessive warmth, pruritus and difficulty putting


PRODUCT PICKER
Wound Dressing Selecti
Clinical Situation
Wound Care Goals
Care Considerations
TISSUE TYPE
•Epithelium or granulation
In a HEALING wound:
•Protect healing wound
•Promote moisture balance
•Select a dressing or dressing combinatio
can remain in place as long as possible
maintain an appropriate moisture balan
In a NON-HEALING wound, the above goals PLUS:
•Stimulate healing in a non-healing or stalled wound
•Select a dressing that can rema
long as possible and maintain
moisture balance
If granular tissue is friable
•Treat the cause of the infl
•Consider selecting a prim
anti-inflammatory actio
If the wound is not infl
•Consider a pro-inflam
'kick start' healing

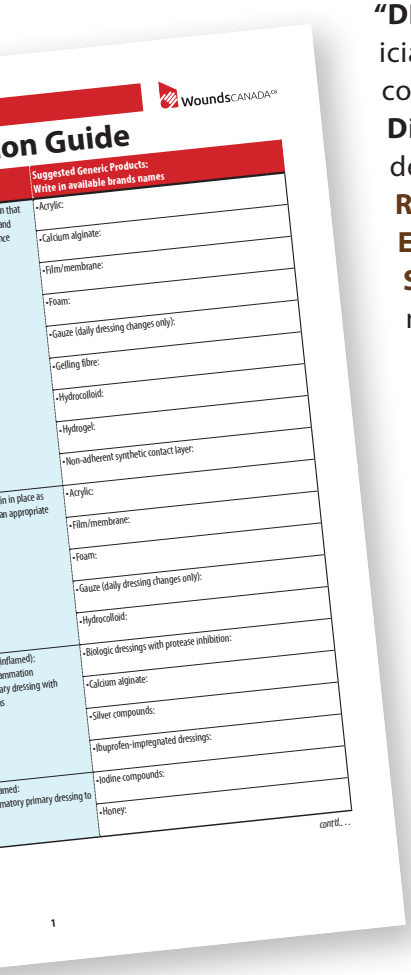
on footwear and other clothing. Exudate control has also been identified as a key factor in patient satisfaction with a given dressing. High-volume and viscous exudate is often associated with unpleasant odour, painful periwound maceration, increased infection risk and exorbitant care costs due to frequent dressing changes. Leakage from dressings on highly exudative wounds onto clothing, furniture or bed linens can cause embarrassment and social isolation.

Psychological stress also has a major effect on wound healing. Stress activates the 'fight-or-flight' response, which directs critical biological resources away from the wound healing process, thus delaying healing.

How do you determine which dressing to use?

It is important to contextualize the wound in relation to the patient's goals and overall health-care plan. The acronym **"DRESSINGS?"** can help clinicians remember some of the considerations to keep in mind:

Dimensions: diameter and depth
Resources and costs
Exudate: amount and viscosity
Site: location, contour, movement, contamination
Surrounding area: skin and beyond
Infection (upper or lower) or biofilm
Necrotic or non-viable tissue
Goals: healable, non-healing, non-healable
Suffering: pain and related symptoms
? Questions from the patient and/or care partner(s)



Wounds Canada's Product Picker: Wound Dressing Formulary is an excellent resource for determining the type(s) of dressing(s) that might be considered for a given patient. You may view it at: https://www.woundscanada.ca/docman/public/health-care-professional/1114-product-picker-2017-selection-guide-1/file.

Local Infection and Antibacterial Dressings

Dressing selection should take into consideration the healing potential of the wound:

- Healable: adequate blood supply to heal
- Healable but non-healing: adequate blood supply to heal, but either the patient cannot or will not adhere to the plan of care or the health-care system does not have the appropriate resources
- Non-healable: inadequate blood supply and/or the cause cannot be corrected

Superficial infection should be treated topically, while deep infection should be treated systematically.

References

1. Lustig A, Gefen A. The performance of gelling fibre wound dressings under clinically relevant robotic laboratory tests. Int Wound J. 2022, doi: 10.1111/iwj.13761.
2. Lustig A, Alves P, Call E, Santamaria N, Gefen A. The sorptivity and durability of gelling fibre dressings tested in a simulated sacral pressure ulcer system. Int Wound J. 2021;18(2):194–208.

Wounds Canada: Limb Preservation Symposium

The Wrong Side of the Knife

Speaker: Neil Hopper, BSc MB BCh MD FRCS

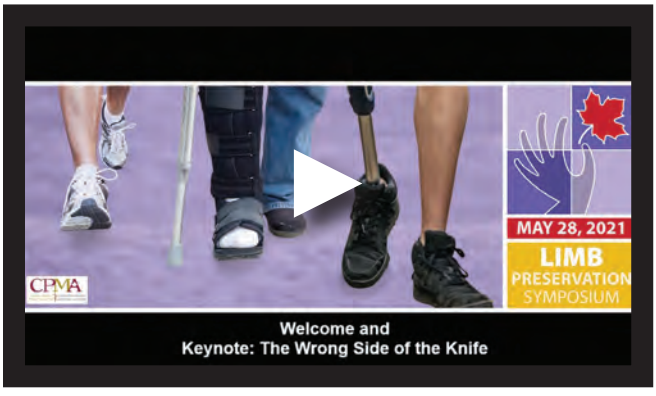
A session summary from Wounds Canada's 2021 Limb Preservation Symposium

Neil Hopper is a 44-year-old Welsh consultant vascular surgeon. Prior to April 2019, his engagement with his patients ended the moment they were discharged; he never thought about impact of his work after the patients returned home. This all changed when he experienced an amputation as the patient, not the surgeon.

In April 2019, Hopper took a camping trip with his son and daughter, and all three of them became ill with diarrhea and vomiting. While his children got better quickly, Hopper's symptoms continued, and he developed additional flu-like symptoms such as aching joints and fever. After returning home, he took brufen and paracetamol with a glass of whisky and went to bed.

Twelve hours later, Hopper woke up in the emergency department of his own hospital. He was hypotensive, tachycardic and febrile. With fluids and antibiotics, he began to improve but was transferred to the intensive care unit. At this point, Hopper had intense pain in his feet. His doctors suggested he be transferred for hyperbaric oxygen therapy. At first he refused to go, citing a lack of evidence that it would improve his condition, but he was eventually convinced to try it. He found the sessions painful and, because he was unable to take books, electronic devices or glasses/contacts into the room, also extremely boring.

After about 16 of the 40 sessions, Hopper became septic and underwent bilateral forefoot amputation. Since he finds the wounds from this type of surgery hard to heal with his own patients, waking up to see he had undergone the



Click to view

Revelation

Hopper learned that assistant nurses are the main point of day-to-day care on the ward. He spent more time speaking with the ward caterer than the doctors providing his care. Now, in his own practice, he always asks the opinion of the staff who spend more time with the patients than anyone else on the team.

surgery was difficult to deal with. Several plastic surgeons he consulted believed they could save the remaining skin on his feet with skin grafts and multiple operations, but they were unable to predict the functionality. A prosthetics team explained that it would be very difficult to fit his feet with functional prosthetics. Below-the-knee prostheses were considered a more viable option in Hopper's case.

At this point, Hopper was fed up and wanted to go home. The thought of having multiple surgeries without a guarantee of function was depressing. He decided to go ahead with bilateral below-knee amputations. After the surgery, Hopper was glad he had made that decision. He felt much better, he felt safe and he began to improve quickly. He was discharged after only a few days.

When he got home and the constant visitors and attention ceased, Hopper had time to reflect on the massive change that had come over his life. He realized he might never work again; his mental health and mood took a turn for the worse. At this point, Hopper received what he calls a "directed motivational speech" from his wife. He set several goals: to walk ASAP, to return to work ASAP, to get off medications ASAP and to work toward acceptance of his new reality.

Revelation

Hopper was surprised that what might be called a surgical success could still be a prosthetist's nightmare. He is now much more likely to involve prosthetists at an earlier stage when working with his surgical patients.

The biggest step forward was being fitted with prosthetic limbs. It wasn't as weird as he thought it would be; they were reasonably comfortable and his balance was acceptable. Six months after his amputation, he returned to work part-time before eventually moving back to full-time about a year following his amputations. Hopper also began going to the gym and enjoying exercise for the first time. He tried paddle boarding and learned how to lift a weight in front of his head, which is very difficult without ankles. He was unable to ride a bike without his feet sliding off the pedals, so he purchased a recumbent bike to enjoy riding with his children.

Hopper's experience has given him insight and knowledge about amputation that many clinicians do not have. He found that losing a limb isn't only physical; it changes how you see yourself, how others see you and your place in society. For him, the mental challenges were greater than the physical challenges.

Revelation

Hopper is now much more tuned in to his patients' experiences during the time between discharge from hospital and the beginning of rehabilitation, about six to eight weeks later. This was the darkest time in his own recovery journey, and he often sees his patients deteriorate during this period.

Hopper found that time passes extremely slowly when you are unoccupied at home. When he was discharged, he was told it would be four weeks until his first prosthetics appointment, but after four weeks he inquired and was told it would likely be another four weeks. This was devastating, as he had been counting down the time. He realized that it can be very dangerous to overpromise on timeframes.

Hopper's experience made him aware of internet forums and blogs related to amputation. Generally, these were a force for good, with sound

advice and connection with others in similar situations. However, he also found that the internet tends to attract people having either an amazing experience or a terrible time. In these spaces, there are strong opinions and lots of conflicting information and experience, which can be confusing and scary. Online forums can also highlight inequality in funding or availability of prosthetics, which can be disheartening. Another concern is "achievement pornography," which shows amputees successfully and enjoyably engaging in intense physical activity. This standard can be misleading: you don't see the blisters these individuals develop or the days off they take to heal in a wheelchair. It is important to be aware that the most noise online is made by those at the far ends of the spectrum.

One of the best things for Hopper was social media: Facebook, Twitter and Instagram. He has learned so much from other amputees and surgeons on these platforms and has made international friends.

Join the Community
Follow Neil Hopper on Social Media
Twitter: @neilhop76
Instagram: @bionicsurgeon

Upon reflecting, Hopper knows he doesn't have all of the answers and can only speak to his own experience. There are still good days and bad days, physical setbacks (especially blisters and phantom limb sensation) and occasional moments of realization when he wakes up in the morning thinking it was all a bad dream. Through all of it, Hopper learned that losing a limb is not just about the physical change, it is also about how the physical change impacts every other facet of life. Amputation isn't a failure and the end of treatment; it is an opportunity for safety, learning and growth. Now, Hopper sees amputation as something to embrace, both as a challenge and the chance for a fresh start.

+ 51% more closed wounds[1*]

PICO◊ sNPWT† has been shown to significantly reduce wound area and depth when compared with tNPWT‡ in patients with VLUs and DFUs over 12 weeks.[1]

Turn around wound healing trajectory more effectively than standard dressings and tNPWT with PICO.[2]

Smith+Nephew

PICO◊ 7
Single Use Negative Pressure Wound Therapy System

Helping you get **CLOSER TO ZERO◊** delay in wound healing
smith-nephew.com/pico

References: 1. Kirsner R, Dove C, Reyzelman A, Vayser D, Jaimes H. A prospective, randomized, 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 Rep Regen*. 2019. May 14 https://doi.org/10.1111/wrr.12727. **2.** Dowsett C, *et al.* Use of PICO◊ to improve clinical and economic outcomes in hard-to-heal wounds. *Wounds International*. 2017;8, p53–58. *45 vs 22%; p=0.002; ITT population. † Single Use Negative Pressure Wound Therapy (sNPWT). ‡ Traditional Negative Pressure Wound Therapy (tNPWT).

Advanced Wound Management Smith & Nephew Inc. | 2280 Argentia Road , Mississauga, Ontario, Canada. L5N 6H8 | www.smith-nephew.com | T 1-800-463-7439 | F 1-800-671-9140

Wounds Canada Pressure Injury Symposium

How can pure hypochlorous acid (pHA) wound cleanser treatment improve the healing outcomes of lower limb wounds?

Presenters: Jeremy Caul, RN BScN MCIs-WH CDE; Amanda Loney, RN BScN IICWW NSWOC WOCC(C)

Jeremy Caul is a registered nurse with a graduate degree focused on wound healing. He has worked with a predominantly Indigenous population for nearly a decade. In his current role he serves as a resource for wound care expertise to the patients and care providers in the Sioux Lookout catchment, which includes more than 30 First Nations, most of which are remote fly-in communities.

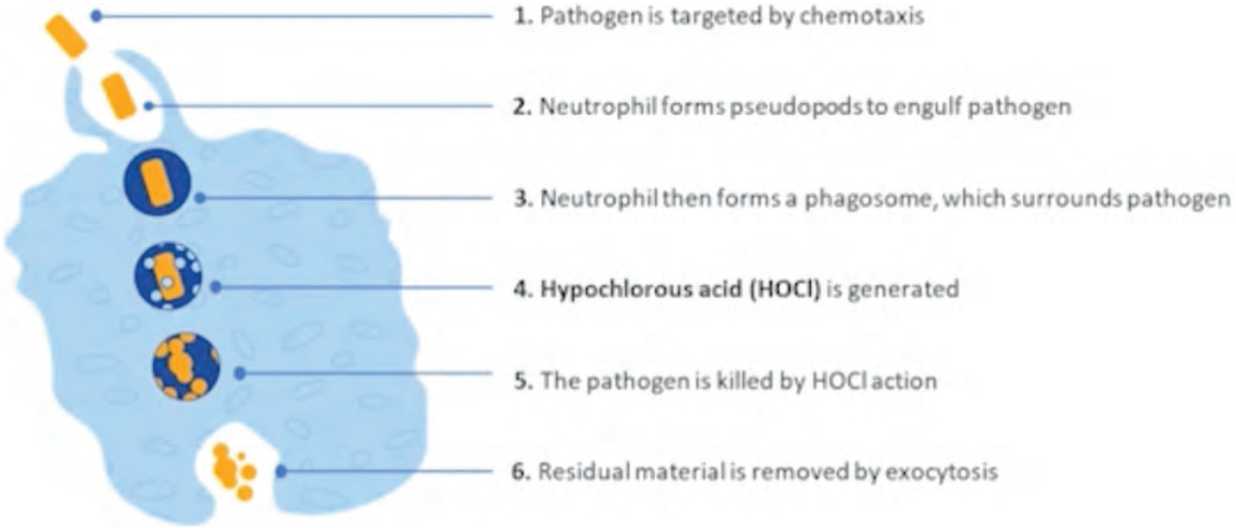
Amanda Loney earned a BScN from the University of Western Ontario, acquired her WOCN designation from Albany Medical Center in New York and has completed the IIWCC at the University of Toronto. As a community-based nurse and educator for 25 years, she has spent the last 20 of those as a certified nurse specialized in wound, ostomy and continence.

Most available wound cleanser options force health-care professionals and patients to compromise. Finding the right balance between competing factors and products can be a challenge. When the safest options are not used, patients are not proactively protected from their predisposed risk of infection, which can result in infection and/or delayed wound closure. Vashe wound cleansing solutions offer clinicians an option that is safe and effective, removing the need for compromise.

Vashe Wound Solution and Pure Hypochlorous Acid

Wound pH change is a gradual process; pH in the wound bed changes slowly via surface effect. Vashe Wound Solution contains 0.033% hypochlorous acid (pHA) as an antimicrobial preservative. pHA is a natural molecule with a pH of 3.5 to 5.5, a range that helps wound healing. Vashe has created an electromechanical manufacturing process that ensures the molecule remains stable within that range over the course of the cleanser's shelf life. Whereas cleansers without pHA may by cytotoxic, particularly if they contain hypochlorite (present in Dakin's solution),

Figure 1. Oxidative Burst Pathway



pHA cleanser (Vashe) is non-toxic to tissues. This means patients are not sacrificing the key cells necessary to promote healing of their skin and closure of their wound.

The body finds hypochlorous acid at 300 parts per million, which is the level present in Vashe (i.e., it mimics the normal pH of healthy human skin and encourages the natural immune system response, see Figure 1). Because it creates the same molecule to kill germs that invade tissue, it's managed by the tissue protective systems that keep hypochlorous toxicity low.

The acidic pH is also hostile to pathogens and biofilm. Vashe stimulates fibroblast proliferation to penetrate and remove biofilm that is 24–48 hours old (MRSA, *E. coli, C. albicans*) in a matter of minutes.

International consensus guidelines on wound infection (IWII, 2022)[1] and a recent consensus publication in the journal *Wound Repair and Regeneration*[2] recommend the use of hypochlorous acid-based cleansers due to the high margin of product safety; it is far less toxic to wound cells than it is to germs. Using pHA to address biofilm using non-cytotoxic, topical antimicrobials promotes the body's natural inflammatory and immune responses, as well as keratinocyte and fibroblast migration.

Figure 2. Vashe® Mimics Natural Skin pH

Why pH Matters: The Role of pH in Chronic Wounds and Solutions

The presence of biofilms, proteases, defective extra-cellular matrix and changing pH make wound healing difficult. Micro-organisms thrive in high-pH environments (pH ~7–9), meaning that increased pH levels in the wound bed can lead to increased biofilm development. Targeting the pH and making the wound environment acidic can therefore benefit the healing process.

As chronic wounds heal, the wound pH decreases significantly. As the wound continues through the healing process, there is protease activity and oxygen release, reduced toxicity of bacterial end products, enhanced destruction of abnormal collagen, angiogenesis, increased macrophage and fibroblast activity, and control of enzyme activity. While other wound cleansers do address bacteria, they are not creating an environment for wound healing (see Figure 2).

Key Take-away Points

- Vashe Wound Solution offers the best results for safety and efficacy.
- Vashe Wound Solution's superiority is driven by a pH associated with optimal wound healing and a robust innate immunity system.

References

1. International Wound Infection Institute (IWII) Wound infection in clinical practice: Principles of best practice. Wounds International. 2022.
2. Eriksson E, Liu PY, Schultz GS, Martins-Green MM, Tanaka R, Weir D, et al. Chronic wounds: Treatment consensus. Wound Rep Reg. 2022;30(2)1–16.

URGO MEDICAL
Healing people®

Presentation Digest is a production of Wounds Canada. (www.woundscanada.ca).

Promoting Autonomy, Empowerment and Self-management in Patients with Wounds

Speakers: Idevania Costa, RN NSWOC MN PhD; Kristen Jones-Bonofiglio, PhD RN

A session summary from Wounds Canada's 2021 National Fall Conference

Autonomy, Bioethics and Empowerment

Autonomy refers to being able to make your own choices without undue influence. When considering autonomy, it is important to think about respect for upholding an individual's right to choose (including their right to make poor, different or diverse choices) and recognize that all behaviour has meaning. Health-care providers have a role in patient decision making and should aim to listen first, inform and teach, problem solve, set realistic and achievable shared goals, and evaluate progress. Decision making can only be as good as the information provided and how it is understood.

Autonomy is a basic tenet of bioethics. Bioethics requires autonomy, but also needs consideration for other principles such as beneficence, non-maleficence and justice. Bioethics also requires values such as humility and compassion. Clinicians must consider how they can use the power they hold—in a safe and respectful way—to support a patient's sense of empowerment.

Definitions of Patient Empowerment (PE)

World Health Organization:[1] PE "may be a social, cultural, psychological or political process through which individuals and social groups are able to express their needs, present their concerns, devise strategies for involvement in decision-making, and achieve political, social and cultural action to meet those needs."

European Network on Patient Empowerment (ENOPE):[2] PE is "a multi-dimensional process that helps people gain control over their own lives and increases their capacity to act on issues that they themselves define as important."

Anderson & Funnell:[3] "Empowerment applied to health is the degree of choice, influence and control held by patients over treatment, the disease and their relationship with health professionals."

History of Patient Empowerment

The concept of patient empowerment began in the 1970s with the Brazilian educator and philosopher Paulo Freire.[4] It arose as a reaction to societal oppression and inequality. It later developed into an area explored by psychologists, educators, sociologists and gender studies experts.[5]

This multidisciplinary approach was linked with health care in the 1990s,[6] with the purpose of challenging the status quo and moving away from the paternalistic model toward more equitable and collaborative models of care delivery.[7]

In the 2000s, patient empowerment was linked to health promotion and health management. It became the backbone of health promotion, and was aimed at increasing patients' autonomy and participation in decision making about their health. In health management, the concept was used as a strategy for the management of chronic conditions to ensure patients participate as partners and take control of their health care to achieve better outcomes.[5]

Barriers to Patient Engagement and Self-management

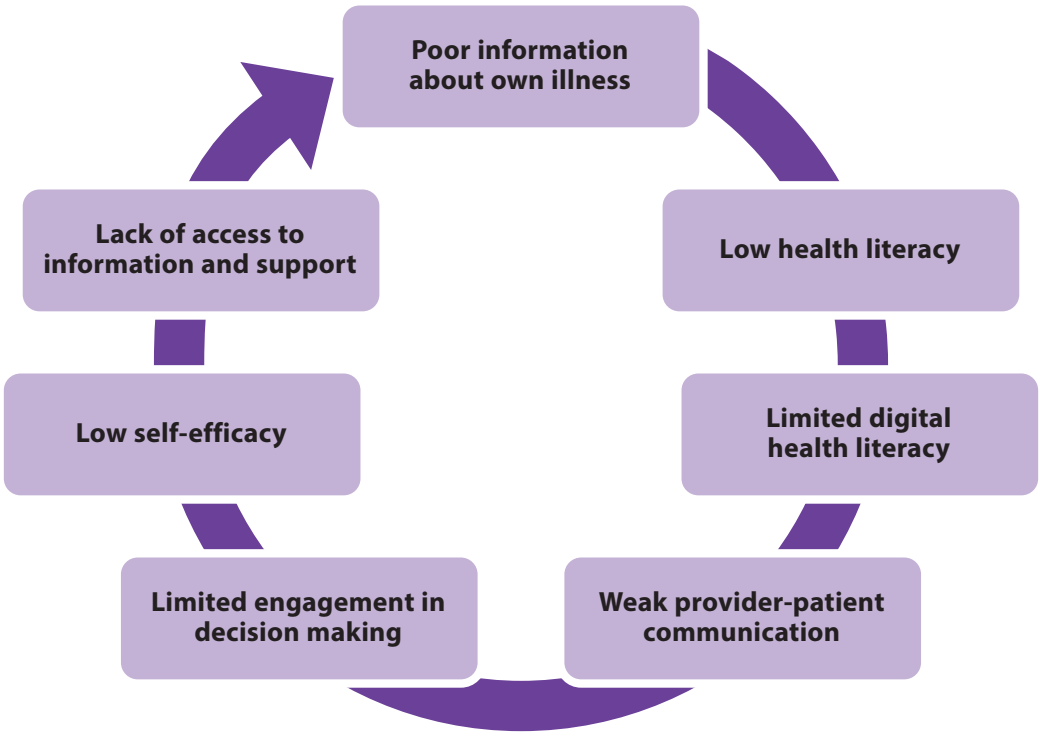
Barriers to patient engagement (see Figure 1) can include patient or health-care provider (HCP) assumptions, expectations or underestimation of potential, as well as availability and accessibility of resources and supports in the health-care system.[9]

At the patient level, barriers can include limited

Dimensions of Patient Engagement and Self-Management[8]

- Participating in decision making
- Gaining control and autonomy
- Acquiring knowledge
- Learning coping skills
- Developing a positive attitude
- Finding motivation/purpose
- Developing trusting relationships
- Gaining or maintaining the ability for self-care

Figure 1. Barriers to Empowerment and Engagement in Self-management



knowledge about their disease and symptoms, lack of understanding about the role of everyday self-management, not being prepared to be engaged, feeling unsupported or alone, or being frustrated with a trial-and-error approach. At the HCP level, barriers can include: not listening to patient needs, taking a paternalistic approach to care that places the patient as a passive subject and underestimating patient ability to be involved in their own care and decision making.

At the systems level, barriers can include a foundation in paternalistic care (biomedical model) that focuses on care for patients with acute conditions only, and minimal investment in health promotion and disease prevention interventions.

Patients Who Don't Want Autonomy

When clinicians have patients who are not interested in engaging in their care, it is important to consider why. Reasons might include: high com-

Take-away Points

- ✔ Create a safe environment for patients to express their needs, concerns, preferences; always welcome questions.
- ✔ Listen to patients' expertise about their life and disease process experiences.
- ✔ Share your professional expertise about the disease, adapt to each patient's context and connect the patient to the right resources and self-management supports at the right time.
- ✔ Assist patients to develop knowledge, confidence, a sense of autonomy and independence for their own care.
- ✔ Set realistic and achievable goals and help patients to make their own informed choices as part of their individualized care plan.

plexity of their current condition (e.g., a complex wound that is unstable), past negative experiences with the health-care system or providers that lack respect, or feelings of fear, anxiety, depression, frustration, anger, hopelessness or helplessness. In these cases, it is important to respect a patient's desire and capability while working with them to improve their current situation and adjust expectations for improving the level of engagement over time.

Benefits of Patient Empowerment

Empowerment enables patients to recognize the costs, benefits and value of engaging in self-management to achieve the desired outcomes, which in turn increases their motivation to continue to perform everyday tasks to avoid further complications (e.g., amputation) as reported by a study's participant:[10]

> *"Right now, as an inconvenience I can live with it, but I know that if I don't do (engage in self-care) what I do every day, it could get much worse. That's my motivation, if I can get it completely better that would be a bonus."*
>
> —Patient's perspective of self-managing a diabetic foot ulcer

Patient empowerment also greatly improves patient satisfaction. In addition, engagement and self-care have the potential to increase one's own health knowledge and responsibility, improve mutual trust and respect between health-care providers and patients, enable patients to better manage their care at home, enable desired outcomes to be achieved and improve patients' quality of life.[11]

References

1. World Health Organization. Health promotion glossary [Internet]. 1998. Available from: https://apps.who.int/iris/handle/10665/64546.
2. EPF Background Brief: Patient Empowerment. Brussels: European Patient's Forum; 2015. Available from: https://www.eu-patient.eu/globalassets/campaign-patient-empowerment/epf_briefing_patientempowerment_2015.pdf.
3. Anderson RM, Funnell MM. Patient empowerment: Reflections on the challenge of fostering the adoption of a new paradigm. Patient Educ Couns. 2005;57(2):153–7.
4. Freire P. Pedagogy of the oppressed. New York, NY: Penguin Education; 1974.
5. Garattini L, Padula A. Patient empowerment in Europe: Is no further research needed? Eur Journal Health Econ. 2018;19(5):637–40.
6. Bravo P, Edwards A, Barr PJ, Scholl I, Elwyn G, McAllister M. Conceptualising patient empowerment: A mixed methods study. BMC Health Serv Res. 2015;15(1).
7. Castro EM, Van Regenmortel T, Vanhaecht K, Sermeus W, Van Hecke A. Patient empowerment, patient participation and patient-centeredness in hospital care: A concept analysis based on a literature review. Patient Educ Couns. 2016;99(12):1923–39.
8. Cerezo PG, Juvé-Udina M-E, Delgado-Hito P. Concepts and measures of patient empowerment: A comprehensive review. Revista da Escola de Enfermagem da USP. 2016;50(4):667–74.
9. Ennis-O'Connor M. What is patient empowerment: Benefits of patient empowerment [Internet]. Patient Empowerment Network. Available from: https://powerfulpatients.org/2018/05/22/what-does-it-mean-to-be-an-empowered-patient/.
10. Costa IG, Tregunno D, Camargo-Plazas P. Patients' journey toward engagement in self-management of diabetic foot ulcer in adults with types 1 and 2 diabetes: A constructivist grounded theory study. Can J Diabetes. 2021;45(2).
11. Aujoulat I, d'Hoore W, Deccache A. Patient empowerment in theory and practice: Polysemy or cacophony? Patient Educ Couns. 2007;66(1):13–20.

Pressure Injury Prevention: A Guide for Providers and Patients

By Marlene Varga, MSc RN IIWCC, and Linda Moss

The COVID-19 pandemic has highlighted the importance of prevention as well as the political and systemic challenges within health care. Wound prevention and management have been areas hard hit by the pandemic, as illustrated by the military reports on long-term care facilities in Ontario and Quebec[1,2] and surveys conducted by Wounds Canada. This article focuses on pressure injury prevention in practice from both a clinician and community advocate perspective and uses some of the lessons learned before and during the pandemic to highlight challenges and provide helpful information and resources that clinicians can use with their patients and their families.

As a Clinical Nurse Specialist in a full-time pressure injury prevention role in a large organization, ***Marlene Varga*** *is aware of the challenges and opportunities in making prevention as a priority*

Linda Moss *became one of Canada's leading advocates of pressure injury awareness after her father was admitted to hospital and developed a PI that eventually led to his death.*

From Marlene Varga: An Organizational Perspective on Pressure Injury Prevention

In any aspect of health care, patients, residents, families and care partners must be involved every step of the way. Within our organization's pressure injury prevention program, we have recognized that some of the most important things we can do are to enhance the patient-health provider relationship, improve the awareness and dialogue about pressure injury prevention, and include patients and their circle all along their journey. Listening to our patients has helped our organization improve our program and further explore opportunities to support patient, family, and community awareness and person-centred care in the area of pressure injuries.

For pressure injury prevention awareness and programming to be front and centre in organizations, prevention needs to be identified as a strategic priority supported by strong leadership engagement. In my career I have witnessed 25 years of pressure injuries in acute care. I'm fortunate to work in an organization that recognizes that there needs to be structure and processes around pressure injury prevention to improve outcomes. Through our senior leadership commitment to prevention and patient safety we are making a difference in raising awareness, mobilizing, educating and engaging our teams and standardizing processes to prevent facility-acquired pressure injuries. This priority aligns with the expectations that patients want a strong commitment to prevention, appropriate evidence-based interventions, self-management options and good interactions within the system.[3]

Consumers of care have identified that they need information about pressure injuries related to knowledge and skills, risk factors for pressure injuries, accessing pressure injury care, quality of life for patients and care partners, and the pressure injury itself.[4] Informal care partners place high importance on education for pressure injury prevention, including how pressure injuries occur, preventing a pressure injury during immobility, pressure injury risk factors, facility-based pressure

injury prevention plans, skin care and pressure injury healing strategies.[4] Today's situation is full of opportunities; research shows there is currently poor patient engagement and understanding of information on pressure injuries.[5]

An understanding of pressure injury risk and patient engagement in prevention strategies can be influenced by factors such as:

- the complexity of the tasks that patients are asked to undertake
- whether the patient has had any previous experience with pressure injuries
- the quality of the health-care personnel interactions[6]

Therefore, providing information is a complex process and requires consideration of the recipients and how they may receive this information.

Minimum Expectations and Key Considerations for Pressure Injury Prevention for Patients and Families

Patients and families have expectations of health care related to health outcomes, clinician experience and the health system.[3]

Health outcomes: Expect that your skin and risk level will be assessed on admission and that a prevention plan will be established by the care team with your input. Expect that a goal of pressure injury prevention will be established on admission. Ask that these assessments be completed on admission, communicated to you and your family and documented in the health record.

Clinicians: Expect that the care team will communicate with you about the care plan, how you can partner in that care plan and that the care team will listen to your input regarding evaluating and updating the plan of care. Expect that your care plan goals and strategies will be evaluated and updated regularly by the team with your feedback. Expect that if you do develop a pressure injury in care that this will be communicated to you immediately. Ask your physician about your pressure injury prevention plan.

System/Facility: Expect that the health system has established that skin safety and pressure injury prevention are priorities that are supported by funding, education and policy. Ask your facility how they are monitoring the development of pressure injuries and what the current rate of facility-acquired pressure injuries is within the facility. Many facilities have quality boards and quality councils related to quality improvement activities. Quality boards should have audit information about the status of pressure injuries in the facility and action planning for quality improvement activities related to pressure injury prevention. Quality councils bring the team together to discuss opportunities for quality improvement. Patients, residents and family members are encouraged to be part of these regular council meetings.

Pamphlets, leaflets, and awareness posters and videos for patients and families can only go so far. Moore and colleagues identified the opportunities to identify who can and should be involved in pressure injury care.[7] For those who can be involved, connection, communication, care-planning and compassion are key. Tools have been developed to support patient engagement[7,8] to encourage patients, families and caregivers to be involved in the prevention and management of wounds and encourage a meaningful shift to the concept of patient involvement. The challenge is that these tools are targeted toward providers and may not be fully facilitated and shared with patients.

Ask how your voice can support and advocate for organizational or system changes based on your expectations and experience.

Encourage Patient and Family Participation

Most patients recognize that the health system influences the health care they receive apart from individual clinician encounters.[3] Pressure injury prevention is therefore complex as systems may not be set up or funded to focus on prevention. Place this in the current context of the pandemic, burnout, staffing shortages and integration of electronic health-care records, and we must ask the question: will pressure injury prevention be further developed within organizations or will it take a back seat?

The pandemic: The pandemic limited when families and care partners participate in care. Now that restrictions have changed, we can incorporate care partners back into our system. Essential care partners can be an additional layer of safety and be the voice to speak out about pressure injury prevention when follow-through is lacking.

Staff burnout and shortages: Shortages in health-care staff are estimated to reach 9.9 million globally by 2030, meaning patient, family and care partner involvement will become a necessity[9] and critical for the sustainability of health systems worldwide.[10]

Essential care partners are an underutilized resource that can support person-centred care, engage in pressure injury prevention and advocate for gaps within the system.

While patient and family engagement in care can be beneficial, and even essential in many cases, it can also leave some to feel their involvement is tokenistic, especially when their requests are denied, or decisions have already been made without them.[11]

Like many other patients, families and care partners, Linda Moss learned the hard way about pressure injury prevention. Her story[12] is available to view here. Stories such as hers can be an effective knowledge translation strategy to mobilize best practice evidence to guide decisions in health care and are an integral component of the evidence-based practice movement.[13]

Recent systematic reviews have found that changing health-promoting decision making using storytelling appears to be promising, as stories help people identify with one another and picture themselves behaving differently, which, in turn, reduces resistance and inspires new health behaviours.[14]

Patients and families who courageously share their experiences of illness can help improve not only one individual's care, but also positively affect the system and advocate for change.

For Patients: What to Expect

What should happen: Once admitted to a care facility, a standard skin and risk assessment is performed as early as possible on admission and documented in the medical record. This is completed by the health-care team by assessing your ability to feel discomfort, moisture on the skin, how much you can move in and out of bed, how well you are eating and drinking and the degree to which your skin and tissues are subjected to friction and shear (for example sliding down in bed). Your skin will also be assessed on admission to look for skin changes or previous areas that have had a pressure injury that also puts you at risk. Based on these assessments, the care team is expected to work with you to develop a care plan around your level of risk, implement the plan and evaluate the plan regularly.

3M Science. Applied to Life.™

Your wound care partner every step of the way.

Wound healing can be a complex journey. As patients transition between care settings, they rely on you for consistent, quality care—and you can count on 3M to deliver science-based solutions to support you.

Case study: Infected diabetic foot ulcer
Image at left is at presentation. Image at right was after amputation, debridement, intravenous antibiotic therapy, and 10 weeks with 3M™ Veraflo™ Therapy and 3M™ ActiV.A.C.™ Therapy System. After 3M™ V.A.C.® Therapy was discontinued, 3M™ Promogran Prisma™ Wound Balancing Matrix was applied to facilitate wound closure.

Patient data and photos courtesy of Robert J. Klein, DPM, FACFAS, CWS; Department of Surgery, University of South Carolina – School of Medicine, Greenville, South Carolina. As with any case study, the results and outcomes should not be interpreted as a guarantee or warranty of similar results. Individual results may vary depending on the patient's circumstances and condition.

The results speak for themselves.
To learn more, reach out to your 3M Account Representative at **3M.ca/connect**

Available in Canada from your authorized 3M+KCI distributors.
KCI USA, Inc., a 3M Company. KCI owned and operated by 3M Company.

Available in Canada from

Medical Solutions Division
3M Canada Company
300 Tartan Drive
London, ON N5V 4M9
Canada
1-800-364-3577
3M.ca/Medical

3M Company
2510 Conway Avenue
St. Paul, MN 55144
USA
1-800-228-3957

KCI Medical Canada Inc.
75 Courtneypark Dr., W.,
Unit 4
Mississauga, ON
L5W 0E3

KCI USA, Inc.
12930 IH 10 West
San Antonio, TX
78249

NOTE: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product Instructions For Use prior to application. This material is intended for health care professionals.

What might happen: The initial skin and risk status may be completed days or weeks prior to admission to a facility and therefore will not be an accurate assessment of the current risk and skin status. Or it might not happen at all. Information may not be consistently documented or communicated to patients and care providers on admission. After a current skin and risk assessment is complete, the next, and most important, step is to set a goal for prevention and establish a pressure injury prevention care plan with input from you and your family/care partners and the rest of the team as available. This may not occur consistently in practice due to several provider or organizational barriers or competing priorities.

From Linda Moss: A Care Partner/Advocate Perspective

Suddenly you find yourself entering a very busy and bright hospital, you feel alone, you are scared and trying to navigate long hallways with medical professionals hustling by. You may wander around trying to find where your loved one has been placed. You may be told to wait in a room and then wonder how your loved one is doing. You wait and you feel helpless. As a care partner, you may often have to learn first-hand on your own how to help care for your loved one. The information listed below is a guide to help you navigate what seems like uncharted and sometimes scary territory. The goal is to help bridge any communication barrier between families and health-care personnel, so together we can align and become a united team. We have the same common goal: the safety and well-being of the patient.

First, the Facts

Here are a few important things you should know about pressure injuries.

- Pressure injuries can be called by several names, including pressure ulcers, bedsores, decubitus ulcers.
- Most pressure injuries are preventable; some are unavoidable in certain cases.
- Pressure injuries are caused by unrelieved pressure, sometimes coupled with something called "shear" where the skin moves in one direction and underlying tissue moves in a different direction.
- The main risk factor for the development of a pressure injury is immobility (lack of movement), even for a relatively short period of time.
- Being admitted to a facility puts you at risk for developing a pressure injury.
- Your risk factors for the development of a pressure injury can change over time. If you are sick, unconscious or on medications that reduce your ability to feel pain or to move, your risk increases.
- Pressure injuries typically develop over bony areas like shoulder blades, backside, hips, ankles and heels.
- Your skin may develop red or purple areas as a pressure injury develops.
- Pressure injuries can be painful. However, individuals with nerve impairment (lack of feeling due to spinal cord injury, for example) may feel no pain at all.
- Pressure injuries can develop into deep wounds.
- Severe pressure injuries can lead to infection and even death.

Next Up: Prevention

When you (or your family member) enter a facility to receive care, your risk for a pressure injury becomes something to consider. The good news is you can play an active role in pressure injury prevention and participate in prevention strategies to keep your skin safe.

First, if you do not have a pressure injury upon admission to a facility, document this in your personal records. You can also take photos of your backside and your heels specifically. Ensure the facility has documented that you arrived there without a pressure injury present.

Then, ask your care team the following questions:

- What is my risk level for the development of a pressure injury? Is it high, moderate or low?

Top Tips for Preventing Pressure Injuries: The 3C Approach

1. COMMUNICATE AND COLLABORATE

If you are a patient or care partner:

- Advocate for a meeting to be held with everyone involved to discuss the patient's care and prevention plan as soon after admission as possible. Tip: Virtual meetings may be the easiest way to collaborate on care plans.
- If you notice any early signs of pressure injury damage, communicate immediately with the rest of the care team.

If you are a health-care provider:

- Families need to know what is going on under those sheets. If the you see a wound forming, document it and alert the family/care partners ASAP so discussions can take place with the team to alter the care plan.
- Allow and encourage care partners to rotate to avoid burnout.
- Listen to the families/care partners; they know the patient's history.

2. BE A CHAMPION

If you are a patient or care partner:

- Educate yourselves on the issue so you can be better informed, ask useful questions and provide appropriate help.
- Visit often; your presence with the patient can contribute to recovery.
- Document the patient's progress with video, photos and notes. The time you have with the health-care teams is limited, and thorough documentation gives them the opportunity to see progress or any concerns.

If you are a health-care provider:

- Refer patients, families and care partners to resources. These resources can help families navigate the health-care system and improve their health literacy.
- Help families help the health-care provider teams. Most families want to help, they just don't know what to do. They can help with exercise, minor grooming or comfort needs and feeding. Having a care partner bedside can often safely reduce the workload of nursing and other staff.
- Access the wound care specialist onsite so wounds are prevented or treated promptly to improve patient outcomes and reduce the burden on care teams. If your facility doesn't have a wound specialist, advocate for one.
- Positivity Produces Productivity – encourage your patients; a patient's mental health is critical in their healing and recovery.
- All patients in LTC or hospital deserve the right to have at least one advocate (essential care partner [ECP]) by their side upon entry and at any given time for their own health, safety and mental state. This can be critical in their care and recovery.

3. PROVIDE COMFORT

If you are a patient or care partner:

- The little things mean a lot. Bring clean clothes, slippers, warm blankets, favourite items, a picture of the patient before admittance (so all team members can appreciate who the patient truly is), and music, which for many people is soothing, stimulating or uplifting.
- Most important: If the patient wants to move or get up, encourage it and ask for assistance if needed. Movement is key!

If you are a health-care provider:

- Before leaving the room, take a last look to see if the patient looks comfortable. Immobile patients rely on others to provide for them. Are they cold? Do they need a position adjustment? Are things within reach? Do they need the TV or music on? Ask "Do you need anything?" This helps avoid the call bell push.
- Provide the family with care-related tasks to help ease the burden on care teams. Families want to help!
- Provide companionship. Not all patients have family members or friends who can visit. These people need you!

Resources

Whether you are a health-care professional, a patient or a care partner looking after a vulnerable loved one, you can access many different types of useful resources to help prevent injuries. Here are just a few.

Join a Community

Facebook Wound Care Aware: Patient self-help and support groups play an active role in self-management. Linda Moss started a Facebook group for individuals to reach out to one another about their wound care concerns. This group provides an opportunity for patients to share their stories and voices and to connect with others.

Wounds Canada Care at Home Resources

The Wounds Canada Care at Home Series provides information about preventing and managing pressure injuries at home. This is a great resource that explains what pressure injuries are, common causes and locations of pressure injuries and specific strategies so you can take an active role in prevention at home or anywhere you go.

SSKIN+ Bundle

The SSKIN+ Bundle is a group of interventions that, when implemented together, will support better patient outcomes than when implemented individually. The SSKIN bundle safety card was adapted with permission[15] and is widely used to initiate conversations around pressure injury prevention. An example can be downloaded here. There are several pressure injury prevention interventions available, starting with a skin and risk assessment completed on admission.

Key SSKIN+ interventions include:

- **S**kin assessment on admission: This is to determine the presence or absence of pressure injuries.
- **S**upport surfaces: Ensuring appropriate bed and seating surfaces are in place based on your risk level. Beds and cushions can help redistribute pressure.
- **K**eep Moving: Staying in one position for too long can cause pressure injuries. If you are able to keep moving and stay mobile, this can help reduce your risk for developing pressure injuries. If you are unable to walk or move, the care team will help you change your position regularly to reduce pressure to your skin and tissues.
- **I**ncontinence and moisture: Not being able to hold your urine or stool can also put you at risk of pressure injuries. If these waste products encounter your skin, the area must be cleaned and protected from these potentially damaging irritants and moisture. Keeping moisture, heat and humidity away from the skin is important.
- **N**utrition and hydration: Eating well and drinking well can also help in preventing pressure injuries. A dietitian can assess your diet and provide recommendations.
- The **+** refers to additional interventions such as patient education, empowerment and engagement and use of prophylactic dressings.

Worldwide Stop Pressure Injury Day Advocates

Wounds Canada and other organizations across Canada have joined the global campaign to prevent pressure injuries. Led by the National Pressure Injury Advisory Panel (NPIAP) and the European Pressure Ulcer Advisory Panel (EPUAP),[16] the objective of Worldwide Pressure Injury Prevention Day is to increase awareness about pressure injury prevention and to educate the public on this topic. In Alberta a "Red Shirt Day" Campaign runs on the third Thursday every November to raise awareness of pressure injuries, with the recognition that, although skin redness often is the first visual sign of pressure-related damage, persons with dark skin tones may present with skin discoloration instead of redness. Visit here for more information.

- What is included in my pressure injury prevention care plan? Is there a goal established to prevent pressure injuries for me? What are the key strategies that will be implemented to prevent pressure injuries? Some of the elements of a pressure injury plan you may want to ask about include:
  - Regular skin checks to look for early signs of pressure injury
  - Appropriate bed and seating surfaces
  - Mobility plan and/or repositioning schedule
  - Moisture management plan to keep damaging moisture (like sweat, urine and fecal matter) away from skin
  - A plan to protect skin from devices such as splints or tubes
  - Nutritional assessment and plan
- What information can be provided to me, my family or care partner about pressure injury prevention? How will this information be followed up by discussions with me, my family or care partner?
- How can we be involved in developing and participating in the care plan?
- Will I, my family/care partner and physician be informed if I develop a pressure injury?
- Does the facility have a comprehensive pressure injury prevention program in place?
- What are the current statistics around pressure injuries that develop in the care facility?
- Are there regular audits to monitor quality improvement strategies related to pressure injury prevention?

Some of these questions may be challenging to understand or even ask. Health-care providers, community advocates and wound care organizations such as Wounds Canada are in place to help the public increase their awareness and knowledge and be equal partners in pressure injury prevention if able.

References

1. Canadian Armed Forces. Canadian Armed Forces Report on Ontario Long-term Care Homes. 2020. Available from: www.macleans.ca/wp-content/uploads/2020/05/JTFCObservations-in-LTCF-in-ON.pdf
2. Canadian Armed Forces. Canadian Armed Forces Report on Quebec Long-term Care Homes. 2020. Available from: https://cdn-contenu.quebec.ca/cdn-contenu/sante/documents/Problemes_de_sante/covid-19/Rapport_FAC/Observation_FAC_CHSLD.pdf?1590587216
3. El-Haddad C, Hegazi I, Hu W. Understanding patient expectations of health care: A qualitative study. J Patient Exp. 2020;7(6):1724–31.
4. Haesler E, Pittman J, Cuddigan J, Law S, Chang YY, Balzer K, et al. An exploration of the perspectives of individuals and their caregivers on pressure ulcer/injury prevention and management to inform the development of a clinical guideline. J Tissue Viability. 2022;31(1):1–10.
5. Fletcher J. Pressure Ulcer Education: Giving information to patients. Nurs Times. 2020;116(5):31–33.
6. McInnes E, Chaboyer W, Murray E, Allen T, Jones P. The role of patients in pressure injury prevention: A survey of acute care patients. BMC Nursing. 2014;13(1).
7. Moore Z, Kapp S, Sandoz H, Probst S, Milne C, Meaume S, et al. A tool to promote patient and informal career involvement for shared wound care. 2021;12(3);86–92
8. International Best Practice Statement: Optimizing patient involvement in wound management. Wounds Int. 2016. Available from: https://www.woundsinternational.com/resources/details/international-best-practice-statement-optimising-patient-involvement-in-wound-management
9. Moore Z. Patient involvement: A necessity not a dream. J Wound Care. 2022;31(4):281. Available from: http://dx.doi.org/10.12968/jowc.2022.31.4.281.
10. World Health Organization. Health workforce data and statistics. 2022. Available from: https://tinyurl.com/2p98enwj.
11. Bombard Y, Baker GR, Orlando E, Fancott C, Bhatia P, Casalino S, et al. Engaging patients to improve quality of care: A systematic review. Implement Sci. 2018;13(1).
12. Ibbetson H, Moss L. What if the family had known more? Wound Care Canada. 2021;19(2);16–23.
13. Rose R, Chakraborty S, Mason-Lai P, Brocke W, Page SA, Cawthorpe D. The storied mind: A meta-narrative review exploring the capacity of stories to foster humanism in health care. J Hosp Adm. 2015;5(1):52.
14. Perrier M-J, Martin Ginis KA. Changing health-promoting behaviours through narrative interventions: A systematic review. J Health Psychol. 2018;23(11):1499–517.
15. Arrowsmith M, Heywood N, Herring L, Baguno C. A novel method of preventing pressure ulcers: The pressure ulcer safety card. Wounds UK. 2021;17(2);54–56.
16. European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers/Injuries: Quick Reference Guide. 2019. Available from: https://www.internationalguideline.com/static/pdfs/Quick_Reference_Guide-10Mar2019.pdf.

WoundsCANADA.ca

Join us for our

NATIONAL CONFERENCE IN TORONTO

Wounds Canada 2022: From Knowledge to Action

OCTOBER 14-16

With special Pre-Conference Day on October 13th of workshops and on-demand sessions!

Learn, network and collaborate with us at the Sheraton Centre Toronto Hotel!

REGISTER NOW

Wounds Canada 2022 In-Person Fall Conference Toronto

VIRTUAL CONFERENCE PACKAGE

Can't make it in person?
Our virtual conference package offers access to:

- this highly anticipated National Conference
- the interactive Pressure Injury Symposium on November 17

And on-demand sessions from earlier this year:

- **Limb Preservation Symposium** "Putting our Best Foot Forward"
- **Patient Journey Conference** "Our Voices, Stories"

REGISTER NOW
woundscanada2022.ca

TEMERTY FACULTY OF MEDICINE
UNIVERSITY OF TORONTO
Continuing Professional Development

This event is an Accredited Group Learning Activity (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada, approved by Continuing Professional Development, Temerty Faculty of Medicine, University of Toronto and the Department of Family and Community Medicine. You may claim a maximum of 16.5 hours.

Wounds Canada Pressure Injury Symposium:

Pressure Injury Prevention: "Synergy in Practice"

Presenters: Debra Johnston, MN RN NSWOC WOCC(C); Leslie Heath, MCIS-c RN NSWOC WOCC(C)

Debra Johnston is a clinical nurse specialist certified in wound, ostomy and continence. Her practice at the University Health Network Toronto General Hospital aims to improve quality of life of patients and their families by developing and promoting quality care through best practice guideline development and providing education for patients living with wounds, ostomies and fistulae.

Leslie Heath is a certified nurse specialized in wound, ostomy and continence. Her practice focuses on providing specialized holistic assessment, prevention, treatment and management strategies for patients living with acute or chronic wounds, ostomies and fistulas. As a Clinical Nurse Specialist, she provides consultation and treatment recommendations while advocating on behalf of patients across the continuum of care.

Pressure injuries (PIs) are the third most expensive disorder in hospitals, after cancer and cardiovascular disease. The presence of a PI has been associated with a two- to four-fold increase in risk of death for critically ill patients, especially older patients in the intensive care unit (ICU). Two-thirds of all hospital-acquired pressure injuries (HAPIs) occur within the first week of the patient's stay in the ICU. Interruptions to nursing, alarm fatigue, and noise and distractions all contribute to the development of PIs in ICUs. Additional external factors include poor written documentation, poorly defined plans and care goals, poor transfer of accountability and missed or delayed initial assessments.

Risk Factors

Patients with immobility and incontinence have been found to be three-and-a-half times more likely to develop a hospital-acquired PI than those without these additional risk factors. This risk persists after controlling for immobility.

Prior to implementing changes to a PI prevention or management program, needs and gaps must be identified. This assessment must be ongoing and include feedback from frontline staff. All team members should be included, and education and resources must be readily available. There must be investment in the point of care. Staff providing the day-to-day care are the ones best positioned to see the issues, gaps and opportunities for improvement. They are also in the best position to implement education and protocol changes, such as use of new equipment.

PI Prevention Bundles

"Bundles" are the implementation of three to six mandatory interventions that are targeted toward a specific procedure or treatment. They can help standardize the language used, the specific care provided to promote best practice, and can act as a snapshot of an evidence-based guideline.

Education is key in pressure injury prevention. Education must be provided to health-care providers (HCPs) at all levels who interact with the patient. It must be multi-pronged and multi-modal. Patients and their families/care partners should receive information and training on skin and wound care, the need for frequent repositioning and when to seek medical attention. Written handouts with pictures should be given, and HCPs should speak at the patient's level of understanding and ask for the patient's and family's verbalization of understanding. It is important to regularly assess the effectiveness of education programs for both staff and patients so that the most up-to-date, relevant information is readily available.

Wherever possible, it is recommended that a nurse

specialized in wound, ostomy and continence care (NSWOC) be included in the pressure injury prevention/management team. NSWOCs can act as HCP-mentors; guides for prevention, practice and education; advocates; developers of best practice; collectors of data; and specialists in equipment and supplies.

Strong communication among members of the team can help reduce errors and improve patient and health-care provider satisfaction, as well as prevent readmission and even death. (It is important to remember that communication gaps can occur between the patient and HCPs and among HCPs.)

Programs using a bundled approach to PI prevention include the following components:

- Risk assessment
- Skin assessment
- Defined skin care regimen
- Measures to control extrinsic factors
- Nutritional education and support
- Use of appropriate support surfaces
- Patient and family education
- Clinician training
- Resources to guide staff with preventative care

These programs should be based on:

- A common outlook
- External support
- Bedside support and feedback
- Team communication
- Manager/leader communication and accountability

Litigation Related to Pressure Injuries

Primary Causes of Litigation

- Minimal to no patient/family education on the problem and the prognosis
- Unrealistic goals and prognosis
- Poor documentation of care and/or justification of selected treatment

Common types of litigations include:

- Disregarding prevention procedures
- Intentionally falsifying medical records
- Neglect or abuse
- Overmedication
- Malnutrition
- Care gaps (e.g., improper support surfaces, failure to turn and reposition, inadequate treatment, infection)

Prophylactic Dressings

A meta-analysis of 25 studies supports the use of a five-layer silicone dressing to the sacrum and coccyx as prevention against friction and shear. These dressings have been proven to combat extrinsic factors that can contribute to developing pressure injuries, including redistributing pressure and shear, reducing friction and tissue deformation, and maintaining an optimal microclimate. They are used in conjunction with regular skin assessment and use of support surfaces. While there are many prophylactic dressings available, they are not all built the same; the engineering behind the dressing is what will eventually determine healing outcomes.

REACT

Remove the source of pressure

Ensure you protect the skin

Assess and evaluate your intervention

Communicate with your team

Talk to your patient

Closing the Gap Between Planning and Implementing Prevention Strategies

The implementation of PI prevention strategies extends beyond the "doing" of a planned activity. Documentation must be balanced with patient care. Good documentation must be comprehensive, consistent, concise, chronological, continuous and reasonably complete. Success requires a shift from a solely unit-based PI management approach to a systemic, hospital-wide approach.

Presentation Digest is a production of Wounds Canada (www.woundscanada.ca).

Wounds Canada Pressure Injury Symposium:

Reducing the Risk of Pressure Injuries and Advancing Wound Management

Presenter: Jessica Pehrson, MSN RN CWS PHN

Jessica Pehrson is a senior application engineer at 3M in the Medical Solutions Division working with the acute and advanced wound care product portfolios. She has a master's degree in nursing education and 16 years' experience working as a bedside nurse, nursing educator and nurse manager in a level-one trauma hospital

A pressure injury (PI) is defined as localized damage to the skin and/or underlying tissue that results from pressure or pressure in combination with shear. PIs usually occur over a bony prominence but may also be related to a medical device or other object. While PIs are not a new concept in critical care, protocols associated with COVID-19 care have uncovered additional risks for patients developing the condition.

PIs can develop in as little as six hours and can add an additional three to seven days to a patient's hospital stay. In a global study of 90 countries, 59% of PIs were found to be acquired in intensive care units. Factors that contribute to pressure injuries include general factors like pressure, friction, shear, moisture and presence of a medical device, or ICU-related factors like mechanical ventilation, hemodialysis, lengthy procedures, vasopressors that reduce blood flow, and use of a blood pressure cuff.

Patients most at risk of developing PIs include those with spinal cord injuries, orthopedic conditions, diabetes, obesity, peripheral arterial disease, impaired perfusion or those at the extremes of age.

While ischemia (inadequate blood flow) plays a role, it is now known that the primary driver of PIs is deformation of soft tissue. Direct damage from sustained deformation (due to pressure and shear) can result in cell damage in a matter of minutes.

In some cases, because they share common risk factors, a PI and incontinence-associated dermatitis (IAD) can happen at the same time. Patients with IAD are four times more likely to experience a facility-acquired sacral PI than those without IAD.

While prevention is always the goal, there are several patient and provider challenges that can impede effective prevention protocols. Patient challenges include:

- Prone positioning in treating COVID-19 adds pressure on bony prominences of the chest and face.
- Repositioning ICU patients can be more complex and difficult due to attachments to critical devices and tubing.
- Non-invasive ventilation and nasal oxygenation can increase PI risk around the nose and mouth.
- Mechanical ventilation increases risk of ICU-acquired PIs.

Provider challenges include:

- No current risk assessment tools predict PI in all patients. Evidence-based practice tools should be used daily to determine risk, especially in ICUs where conditions can change quickly.
- Staffing shortages in ICUs may mean adding staff that may not have ICU training.

- Reducing the frequency and length of time at the patient bedside may limit observation and intervention.
- Evidence-based education programs for preventing PIs in the ICU may not be readily available.
- Prolonged use of personal protective equipment, like respirators and face shields, may contribute to clinician skin breakdown, including PIs.

Innovative 3M Products Help Prevent and Manage PIs

Currently available 3M products for helping protect patients from PI development include:

- 3M™ Cavilon™ No Sting Barrier Film
- 3M™ Cavilon™ Advanced Skin Protectant
- 3M™ Cavilon™ No-Rinse Skin Cleanser

3M products available to help manage patients with PIs include:

- 3M™ V.A.C.® Therapy
- 3M™ Veraflo™ Therapy
- 3M™ Promogran Prisma™ Wound Balancing Matrix
- 3M™ Tegaderm™ High Performance Foam Adhesive Dressing

3M™ Tegaderm™ Silicone Foam Dressings from 3M are available to both help protect from and manage PIs.

3M™ Cavilon™ No Sting Barrier Film is a terpolymer-based, alcohol-free barrier film designed for routine skin protection. It is fast-drying, long-lasting and waterproof, making it easy for clinicians to use. Its alcohol-free, sting-free, fragrance-free and preservative-free design makes it gentle, with a low dermatitis potential. The barrier film helps maintain a continuous positive coating; it is also sterile and compatible with chlorhexidine gluconate (CHG). It helps protect skin from friction and abrasion, which is an improvement over many creams, ointments and pastes that can increase friction at the skin surface.

3M™ Cavilon™ No-Rinse Skin Cleanser is a liquid cleanser that also moisturizes. It is a gentle, hypoallergenic, pH-balanced formula that contains gentle surfactants that condition and soothe skin. The easy-to-use spray does not require rinsing and helps control odour, making it ideal for incontinence cleansing.

3M™ Tegaderm™ Silicone Foam Dressings are shown to reduce tissue deformation, minimizing the effects of pressure, friction and shear, which can lead to the formation of pressure injuries. Its unique, multi-layer design absorbs and evaporates moisture, helping reduce the potential for skin maceration. This dressing has significantly longer wear time than other dressings, plus gentle adhesion, both of which may help save facilities time and money by eliminating unscheduled dressing changes.

3M™ Promogran Prisma™ Wound Balancing Matrix is used to provide collagen, which supports granulation tissue formation, maintains a moist wound environment and protects from bacterial bioburden in the dressing.

3M™ Tegaderm™ High Performance Foam Adhesive Dressings are used to manage exudate. The unique, multi-layer design provides high absorbency with high breathability. They adapt to changing levels of exudate while still remaining conformable to difficult body contours and not sticking to the wound bed.

3M™ V.A.C.® Therapy is a negative-pressure wound therapy (NPWT) device. NPWT is a well-known adjunctive therapeutic option between surgical debridement and final coverage that has shown promise in the management of stage 3 and 4 chronic sacral and ischial pressure injuries.

3M™ Veraflo™ Therapy combines the benefits of V.A.C.® Therapy with automated topical wound solution distribution and removal to help cleanse the wound, remove infectious material and provide a wound healing environment. This helps healing by allowing wounds to be repetitively cleansed without the need for dressing removal.

Presentation Digest is a production of Wounds Canada. (www.woundscanada.ca).

A Patient Resource:

Eating Well for Wound Healing

By Ellen Mackay, MSc RD CDE

Nourishing your body with good food that you enjoy can help keep your skin healthy, heal your wound and prevent infection. When your body has a wound, you need more calories, protein, fluid and certain vitamins and minerals, such as vitamin C, vitamin A, zinc and iron.

Eat often through each day. Try to have 3 meals and several snacks every day. If you have a poor appetite, eat smaller meals more often and try to eat when your appetite is the best.

Eating Well for Wound Healing

Using Nutrition to Improve Healing Outcomes

WoundsCANADA.ca

Calories (Energy)

Wounds are hungry. Calories provide the energy needed to heal. Foods that contain carbohydrates and fat will give you energy to heal. At meals, eat fresh or frozen fruit, whole grain breads and pasta, rice and starchy vegetables (potatoes, yams and corn) and higher fat foods such as avocados, olives and vegetable oils, nut and seed butters and full-fat dairy products. Your body needs enough energy to use the protein in food to protect your skin and heal your wound.

Protein

Protein is needed to help you maintain your muscles and supply the ingredients to build new tissue to heal your wound. Protein is also needed for your immune system to help fight infection. Include a protein-rich food at each meal and snack. Protein foods can also be a good source of minerals such as iron and zinc that are needed in wound healing. Foods rich in protein include:

- Eggs
- Meat, fish, poultry
- Nuts, seeds
- Cheese, cottage cheese, Greek- or Icelandic-style (SKYR) yogurt
- Beans, lentils, tofu
- Protein powders (whey, soy, collagen, pea, hemp or skim milk powder)

Fluid

Wounds are thirsty. Fluid helps deliver valuable nutrition to the wound. Try to drink at least 6–8 cups (1.5–2 L) of fluid every day. Stay hydrated by drinking a variety of hot or cold beverages such as 100% fruit or vegetable juice, milk or fortified milk alternatives, shakes, broth, tea, coffee and water. If your appetite is poor, have fluids at the end of a meal.

Vitamins and Minerals

Vitamins and minerals are needed to heal your wound and improve your immune system. Eating a variety of foods should give you all the vitamins and minerals you need. Foods rich in vitamin A, vitamin C, zinc and iron are especially important in your diet at this time. Here's a list of some good sources of essential wound-healing nutrients:

- Vitamin A: milk, cheese, eggs, green leafy vegetables, orange fruits and vegetables (apricots, mango, cantaloupe, pumpkin, sweet potatoes)
- Vitamin C: oranges, tomatoes, strawberries, bell peppers, leafy vegetables
- Zinc: meat, poultry, liver, fish and shellfish, milk products, poultry, eggs, beans and lentils
- Iron: liver, shellfish, red meat, beans and lentils, pumpkin seeds, enriched grain products

Blood Glucose

If you live with diabetes, managing blood glucose levels can be challenging when you have a wound. Talk to your diabetes educator or doctor if you need support. Blood glucose levels that are well managed help the wound heal and can prevent new wounds.

Supplements

Nutritional supplements come in many forms, from liquid meal replacement drinks and protein powders to vitamin-mineral pills. If you have not been able to eat enough food and your appetite is poor, you may wish to have a supplement along with your food to help you get the nutrition you need to heal.

- A multivitamin-mineral supplement can be helpful. Choose a general supplement. Talk to your pharmacist if you need help.
- A protein powder (whey, soy, collagen, pea or hemp) can easily be added to your hot cereal, soups or hot and cold drinks. (Mix the powder with a little liquid to make a paste before you add it to foods).
- If you are missing meals or cannot eat enough, a liquid meal replacement drink can give you the extra nutrition you need to heal. Choose a supplement with extra protein and/or extra calories. Some nutrition drinks are made especially for people living with diabetes.

What's on the menu?

Each day, have 3 meals *plus* 3 snacks made up of foods that nourish your body and you enjoy. You can keep track here:

6 servings of fluids	1 serving = 250 ml (1 cup) water, juice, tea	☐ ☐ ☐ ☐ ☐ ☐
4–6 servings of protein	1 serving = 2 eggs *OR* 90 g (3 oz) fish, chicken or meat *OR* 125 ml (½ cup) cottage cheese *OR* 30 ml (2 Tbsp) nut butter *OR* 60 ml (¼ cup) nuts *OR* 45 ml (3 Tbsp) cheese *OR* 175 ml (¾ cup) beans	☐ ☐ ☐ ☐ ☐ ☐
6 servings of grains	1 serving = 1 slice whole grain bread *OR* 175 ml (¾ cup) hot cereal *OR* 125 ml (½ cup) rice or quinoa *OR* 125 ml (½ cup) pasta	☐ ☐ ☐ ☐ ☐ ☐
3 servings of milk products	1 serving = 175 ml (¾ cup) yogurt *OR* 250 ml (1 cup) milk or soy milk	☐ ☐ ☐
2 servings of fruit	1 serving = 1 small fruit *OR* 125 ml (½ cup) pureed *OR* 60 ml (¼ cup) dried	☐ ☐
3 servings of vegetables	1 serving = 250 ml (1 cup) raw *OR* 125 ml (½ cup) cooked	☐ ☐ ☐
4 servings of healthy fats	1 serving = 15 ml (1 tsp) olive oil, margarine/butter *OR* 1/6th avocado	☐ ☐ ☐ ☐

Notes:

- Your dietitian may suggest different amounts that are right for you.
- Please talk to your dietitian about your individual nutrition needs if you live with kidney or liver disease or diabetes.
- Contact your dietitian if you are having trouble eating this amount of food, or if you need more information on meal and snack ideas.

Top Tips for Getting the Nutrition You Need

- ☑ Use full-fat dairy products such as yogurt, milk or cheese.
- ☑ Mix honey, jam, syrups or molasses into yogurt or hot cereals.
- ☑ Add lentils or beans to soups.
- ☑ Cook hot cereals with milk or soy milk.
- ☑ Add olive oil to smoothies, pasta or cooked vegetables.
- ☑ Snack on nuts and seeds. Add nut butters to crackers or fruit or melt it into hot cereal.
- ☑ Blend cottage cheese or Greek yogurt into a smoothie.
- ☑ Add skim milk powder to a glass of milk or mix into mashed potatoes, soups or puddings.
- ☑ Grate cheese onto vegetables.
- ☑ Add canned fish to salads or pasta.
- ☑ Include sliced avocados or hummus in sandwiches.
- ☑ Sprinkle raisins or dried cranberries onto to cereals, salads or yogurt.

Safe, Effective, Non-Cytotoxic Wound Healing

Hydrofera Blue READY-Border®

- No silicone interface for uninterrupted absorption.
- Bacteria is absorbed and killed in the dressing. Safely and effectively.

Perforated silicone border:

- Provides secure hold, yet gentle removal.
- Repositionable, reducing waste.

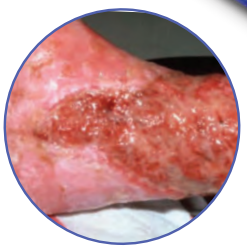
Hydrofera Blue READY®-Transfer

- High rate of moisture transfer.
- Bacteria is killed in the dressing as the exudate passes through.
- Soft, conformable and can be cut.

Under TCC

Under Compression

Areas with Yeast



Venous Leg Ulcer

To request samples email: daniel@hydrof.com

HyderaBLUE®

www.hydrofera.com

Hydrofera Dressings manufactured by: Hydrofera, LLC, 340 Progress Drive, Manchester, CT 06042, USA

MADE IN USA

14-001-099 Rev New

Unfolding Patients' Preferences in Wound Care

By Idevania Costa, RN NSWOC MN PhD

Patient preferences are usually indicated by the words and behaviours patients use to demonstrate their desire to have their voices heard and their needs met during their health-care journey. Patient preferences can be indicated by the choices individuals make when they are provided with options and information about their health and treatment.[1]

Although most patients and care partners want to have their voices heard and their concerns addressed, the wound care community has generally focused mostly on disease-centred symptoms and measuring quality of life.[2,3,4,5] These are important, but they do not necessarily incorporate patients' needs and wants. With growing acknowledgment of wound care as an important specialty and a public health concern that consumes significant resources, it is more important than ever that health-care providers (HCPs) shift their attention to the desires of the human being experiencing the burden of prolonged wound management: patients should be given autonomy to make decisions and have their voices and needs honoured in their own care plan.

Importance of Patient Autonomy and Preferences

According to Varkey, patient autonomy is one of the four ethical principles of bioethics: beneficence, nonmaleficence, autonomy and justice.[6] It refers to a patient's right to make decisions regarding their medical care without being coerced by others such as HCPs.[7] Patient autonomy allows HCPs to educate patients and care partners about treatment options, and the right to ask questions and participate in informed decision making. It does not allow HCPs to make decisions for their patients, which sometimes occurs when a care plan is designed without including them. Patient autonomy is also linked to patient preferences, and we should always be aware that patients have the right to choose what works well

for them and what fits well with their daily routine.

While providing patients with information about their treatment options is crucial, genuine patient-centred care necessitates a decision-making model that integrates ethical aspects.[6] In this model both patients and HCPs share their unique expertise and responsibility about the care they provide (from HCPs) and implement (by patients) with agreement on both sides. This paradigm will involve a change in health care whereby clinicians and patients collaborate to treat complex wounds and make decisions based on the patient's biological traits, preferences, values, beliefs and life circumstances, as well as the best scientific information available to support decision making.

The growing number of clinical circumstances associated with patients living with complex wounds presents various care/treatment options. Each comes with varying benefits and potential risks, and each comes face to face with the needs and desires of individuals. These facts necessitate the development and implementation of a decision-making model that includes patients and care partners at the centre of decision making.[7]

Moving Toward a Model that Considers Patients at the Centre of Care

Health-care organizations are constantly seeking methods that enhance their health-care delivery. As a holistic patient-centred approach to wound care gains attention and the need to have patients and families involved as partners grows, the shortage of wound care nurses and other health-care providers continues and financial pressures in the health-care sector build. Fortunately, when health-care organizations involve patients in their own care and decision-making there is potential to improve outcomes and relieve the pressure experienced in health-care systems due to staff shortages.[8]

The term *patient engagement* refers to a partnership between patients and clinicians that encourages patients to take responsibility for their own health and asks families and care partners to support patients during their health-care journey. Patients who are willing and prepared to engage and collaborate in the design and implementation of their own care plans have better health outcomes and express a higher level of satisfaction.[9,10]

Patient-Centred Wound Care: Are we there yet?

The patient-centred care approach, which stresses communication, collaboration and health promotion while also respecting patients' expectations, autonomy and values, is at the heart of international health-care reform initiatives to enhance the delivery of safe, high-quality and cost-effective services.[9,11]

Patient-centred viewpoints necessitate a paradigm shift away from the paternalistic attitude that health-care workers are the only experts and should develop a care plan for, rather than with, patients at the centre. Patients who are well-informed and actively participate in their wound care become liberated and capable of participating in the design and implementation of their own care plan.[11,12]

As described above, evidence has shown that allowing patients to ask questions and express their needs and concerns resonates with patient-centred wound care. However, this holistic approach to wound care will only be consolidated if clinicians allow it to happen by incorporating patients' voices, needs and concerns in their own care plan as well as approaching each patient as unique and experts in their life and own care. Each of us is responsible for taking action toward shifting the current approach and changing the future of wound care in Canada.

References

1. Jonsen A, Siegler M, Winslade W. Clinical ethics: A practical approach to ethical decisions in clinical medicine. 7th ed. McGraw-Hill Education/Medical; 2010. Available from: https://accessmedicine.mhmedical.com/content.aspx?bookid=364&sectionid=39900120.
2. Mudge EJ, Spanou C, Price PE. A focus group study in patients' perception of chronic pain. Wounds UK. 2008;4(2):21–28.
3. Woo KY, Sibbald RG. The improvement of wound-associated pain and healing trajectory with a comprehensive foot and leg ulcer care model. J Wound Ostomy Continence Nurs. 2009;36(2):184–193.
4. Kapp S, Miller C, Santamaria N. The quality of life of people who have chronic wounds and who self-treat. J Clin Nurs. 2018;27(1-2):182–192.
5. Newbern S. Identifying pain and effects on quality of life from chronic wounds secondary to lower-extremity vascular disease: An integrative review. Adv Skin Wound Care. 2018;31(3):102–8.
6. Varkey B. Principles of clinical ethics and their application to practice. Med Princ Pract. 2021;30(1):17–28.
7. Entwistle VA, Carter SM, Cribb A, McCaffery K. Supporting patient autonomy: The importance of clinician-patient relationships. J Gen Intern Med. 2010;25(7):741–5.
8. Selby JV, Beal AC, Frank L. The Patient-Centered Outcomes Research Institute (PCORI) national priorities for research and initial research agenda. JAMA. 2012;307(15):1583–4.
9. Krist AH, Tong ST, Aycock RA, Longo DR. Engaging patients in decision-making and behavior change to promote prevention. Stud Health Technol Inform. 2017;240:284–302.
10. Sepucha KR, Fowler FJ Jr, Mulley AG Jr. Policy support for patient-centered care: The need for measurable improvements in decision quality: Documenting gaps in patients' knowledge could stimulate rapid change, moving decisions and care closer to a patient-centered ideal. Health Aff (Millwood). 2004;Suppl Variation(Suppl2):VAR54–62.
11. Anderson RM, Funnell MM. Patient empowerment: Myths and misconceptions. Patient Educ Couns. 2010;79(3):277–82.
12. Costa IG, Camargo-Plazas P, Tregunno D. Re-thinking self-care management for individuals with diabetic foot ulcers. Wounds Int. 2017;8(2);10–14.

CLF CANADIAN LYMPHEDEMA FRAMEWORK

PCL PARTENARIAT CANADIEN DU LYMPHOEDÈME

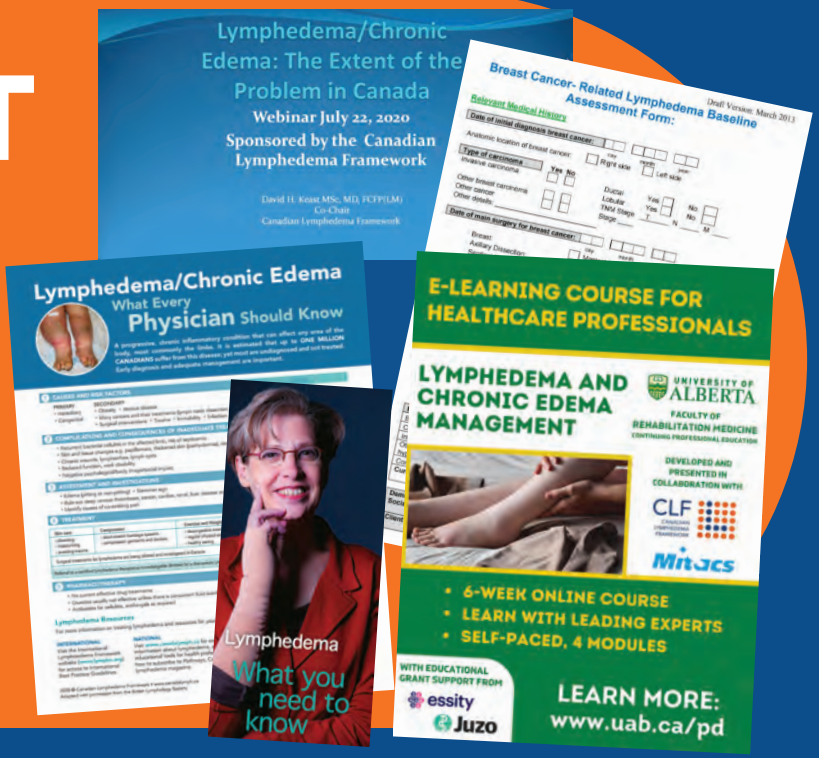
Follow us @canadalymph.ca

PATHWAYS MAGAZINE

- Up-to-Date Clinical Perspectives
- Research News
- Patient Hints & Tips
- Written by Leading Experts
- For Professionals and Patients
- Now in Print and Digital Format

HP TOOLKIT

- Tools for Health Professionals
- PowerPoint Presentations
- Peer-Reviewed Case Studies
- Patient Education Materials
- Assessment Tools
- Physician Information Card
- Photo Library
- Webinar/Video Presentations



Learn more about these and other resources at www.canadalymph.ca

Wound Sleuth

By Carol Ott, MD FRCPC and Alana Miller, MD FRCPC

Why didn't this lower leg ulcer heal?

History

RV is a 73-year-old female who presented to the wound clinic with a 10-year history of venous stasis, venous stasis dermatitis and leg ulcers. Her ulcers were painful and often became infected, requiring many courses of antibiotics.

Other past medical history included type 2 diabetes, atrial fibrillation, hypertension, osteoporosis and diastolic heart failure. Her medications were glicazide, metformin, sitagliptin, rivaroxaban, rosuvastatin and furosemide.

On examination, her dorsal pedal pulses were strong in both feet. Lipodermatosclerosis, with the inverted champagne bottle sign, was present bilaterally. Hyperkeratosis and venous stasis dermatitis were also present on both legs. An ulcer was located on the lateral side of her left leg.

Q How would you treat this patient?

A Treatment involved washing her left leg with a facecloth, soap and water to remove the hyperkeratosis. Betamethasone 0.1% cream was applied to the dermatitis, followed by an antiseptic primary dressing and an absorptive dressing. Tubular mild elastic compression of 8–12 mmHg was applied to reduce edema and treat the venous stasis.

This treatment continued for several months with improvement to the periwound area, but the central ulcer persisted (see Figure 1).

On a follow-up visit, 3 x 3 mm fragments were removed from the wound. We assumed the fragments were calcinosis that can occur in chronic wounds (see Figure 2).

The fragments were sent to pathology and identified as mature reactive bone, or hypertrophic ossification (HO) (see Figure 3).

Q What would your next steps be?

A To determine whether the HO was a local or diffuse process, X-rays of both legs and

Figure 1: Non-healing ulcer on left leg

Figure 2: Fragments removed from wound

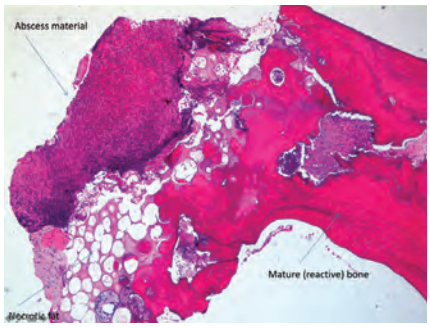


Figure 3: Microscopic view of the fragments

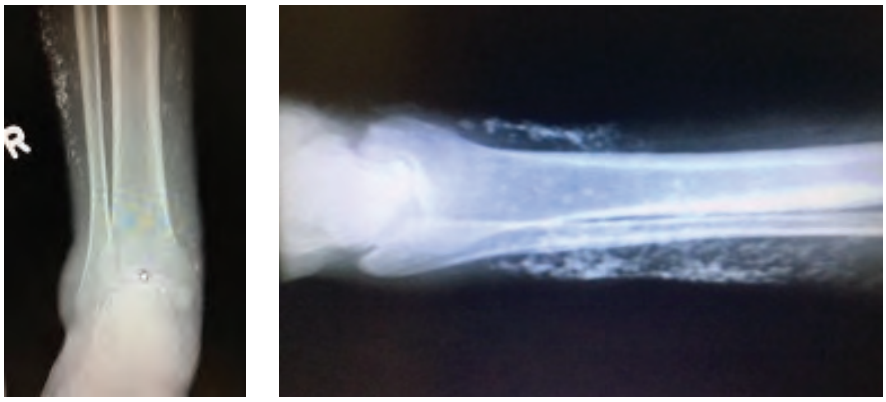


Figure 4: Right and left ankle radiographs showing hypertrophic ossification

Figure 5: Right and left radiographs NOT showing hypertrophic ossification

hands were performed. If the process was diffuse, a work-up for systemic disease-causing hypertrophic ossification is necessary, whereas a localized HO is likely related to the chronic wounds and recurrent infections. The imaging revealed peripheral radiodensities consistent with subcutaneous hypertrophic ossification in the region of chronic venous insufficiency (see Figures 4 and 5).

Discussion

Heterotrophic ossification is extra-articular bone in soft tissue adjacent to bone.[1] It was first recognized in 1692.[2] This condition is distinguished from metastatic calcifications, which occur mainly in hypercalcemia, and dystrophic calcification in tumours.[2]

HO is a relatively common complication following central nervous system disorders such as brain injuries, tumours, spinal cord injuries and encephalitis.[2] HO can occur almost anywhere in the body, including laparotomy scars, the kidney, skeletal muscle and the oral cavity.[3] Hereditary causes include fibrodysplasia ossificans progressive, progressive osseous heteroplasia and Albright's hereditary osteodystrophy.

The pathophysiology of HO is not completely understood. It's believed that three conditions must be met: First is the presence of osteoinductive factors such as inflammation. The second is the presence of osteoprogenitor cells, and finally, an environment conducive to osteogenesis, which leads to unwanted bone formation.[1]

Two theories exist regarding how these three conditions occur in chronic edema and cause HO. The first is that periosteal or cartilaginous cells are traumatically displaced from skeletal structures and are activated by the traumatic stimulus (and possibly other factors) to form bone.[3]

The second theory is that a metaplastic change occurs in ubiquitous pluripotent mesenchymal cells, which transforms the undifferentiated cells into osteoblasts. The trigger may be chronic edema and recurrent cellulitis leading to nutritional injury to the skin and subcutaneous tissues of the leg.[3]

Subcutaneous ossification is a frequent late complication of chronic venous insufficiency.[4] A series of 600 cases of venous insufficiency were studied in the 1960s, and heterotopic bone formation was identified in 10% of patients.[4]

HO due to chronic venous insufficiency is most frequently reported in post-menopausal women.[5] On examination, the typical presentation of HO involves a recurrent or non-healing ulcer.[5] Other features of chronic insufficiency are often present, such as telangiectasia, leg edema and lipodermatosclerosis. On blood work, the serum calcium and phosphate are normal.

The differential diagnosis of HO includes collagen vascular disorders, morphea, dermatomyositis, hyperparathyroidism or malignancy such as sarcoma or metastatic carcinoma.[5] X-ray

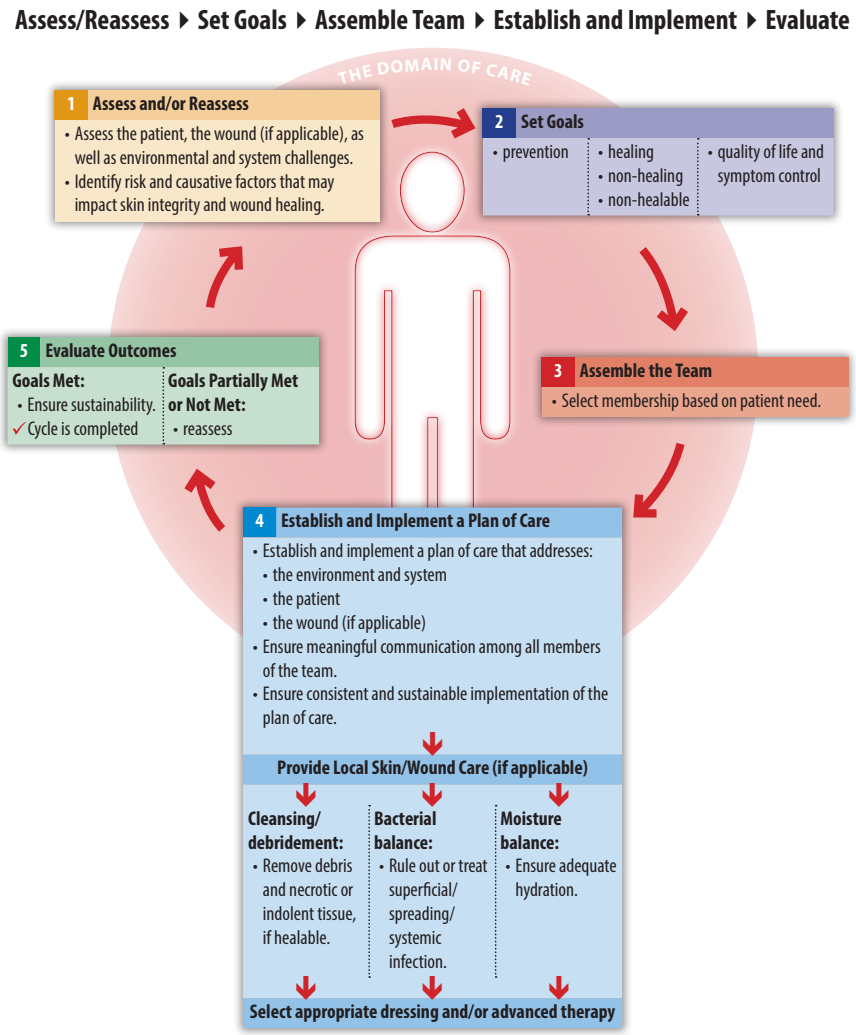


Figure 6: Wound Prevention and Management Cycle

or CT imaging will reveal extensive calcification in soft tissues. Pathology reveals mature cancellous bone with hemosiderin-laden macrophages.[5]

Management

Management is primarily preventative. The chronic venous insufficiency should be treated with compression stockings and extremity elevation to prevent ossification. Once ossified tissue is present, the ossified fragments must be removed, otherwise the ulcer(s) will not heal.[5] Once resected, aggressive wound care for promotion of wound healing and infection prevention is needed. If severe, wound coverage with autograft and biosynthetic skin substitute can be considered.[5]

Conclusion

Our team, a wound care physician and the home care nursing staff, followed Wound Canada's Wound Prevention and Management Cycle (see Figure 6) to heal RV's wound (see Figure 7). We identified and treated the etiology: venous stasis. When initially the ulcer did not heal, we reassessed, identified the ossified fragments and diagnosed HO with the assistance of pathology. Once the HO was discovered, the ossified fragments in the wound were removed and the ulcer healed. Over the next few years, the wound recurred, and the management plan was repeated with success.

Figure 7: Lateral wound now healed

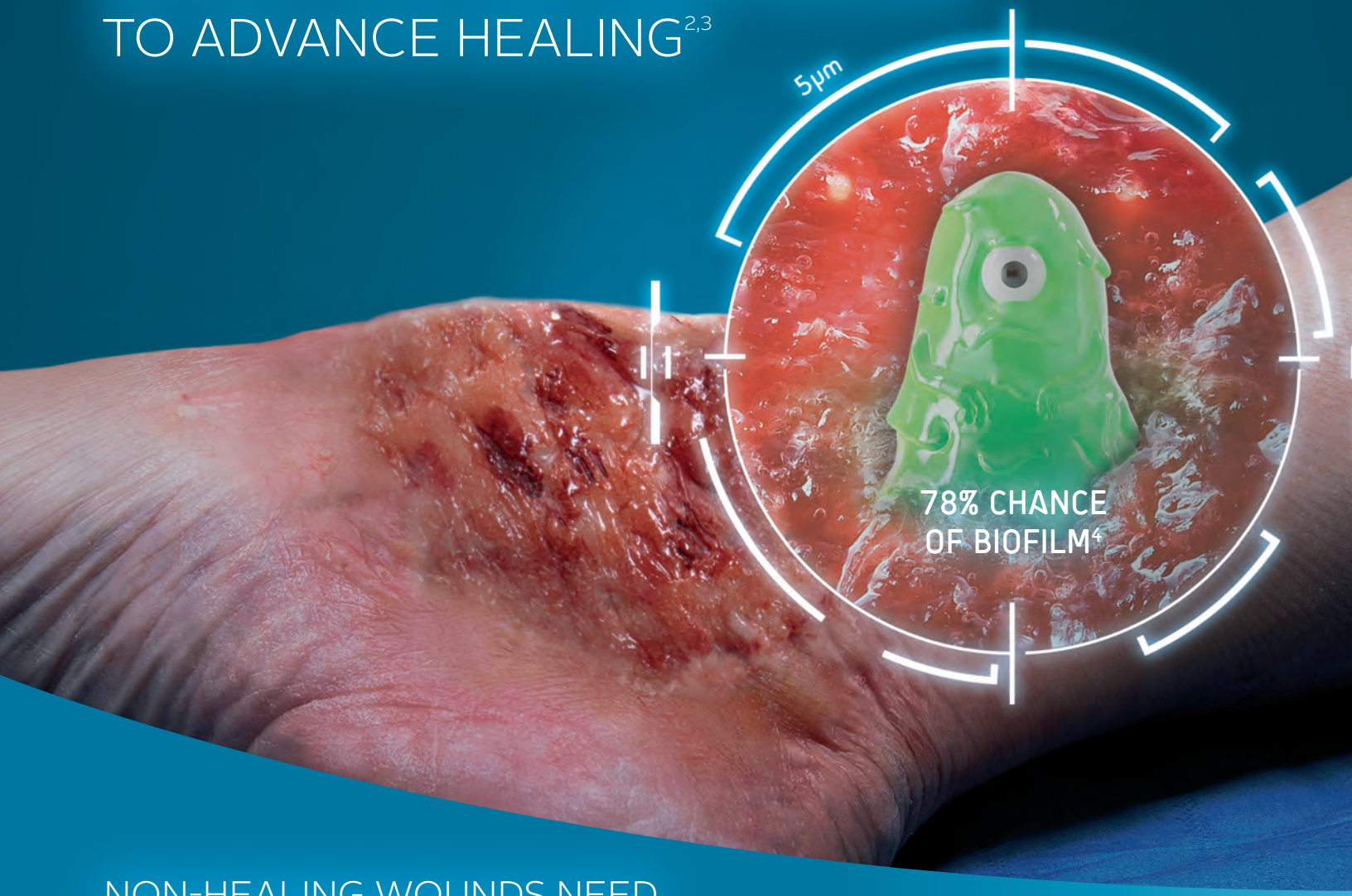
References

1. Hamby D, Kim B. Heterotopic ossification: A case series. J Case Rep Images Med. 2016;2:1.
2. Bossche VL., Vanderstraeten G. Heterotopic ossification: A review. J Rehabil Med. 2005;129–36.
3. Condon RE, Harkins HN. Subcutaneous bone formation in chronic venous insufficiency of the legs. Ann Surg. 1963;157:27–32.
4. Lippmann HI, Goldin RR. Subcutaneous ossification of the legs in chronic venous insufficiency. Radiology. 1960;74(2):279–88.
5. Cafasso DE, Bowen DK, Kinkennon SA, Stanbro MD, Kellicut DC. Heterotopic ossificans in chronic venous insufficiency: A new consideration for clinical, aetiology, anatomy and pathophysiology staging. Phlebology. 2013;28(7):361–5.

AQUACEL® Ag+ Dressings

ConvaTec

YOU HAVE THE POWER TO **DISRUPT AND DESTROY BIOFILM**[1] TO ADVANCE HEALING[2,3]



NON-HEALING WOUNDS NEED **MORE THAN SILVER™**

Specifically developed to win the battle against biofilm, **MORE THAN SILVER**™ technology harnesses the synergistic power of three key components; ionic silver, a surfactant and a metal chelating agent working together to deliver superior[1] performance.*

Hydrofiber® TECHNOLOGY + MORE THAN SILVER® = AQUACEL® Ag+ Dressings

1. Bowler PG, et al. Parsons, Wound Medicine 14 (2016) 6–11. 2. Metcalf DG et al. J. Wound Care 2016; Vol25, No3. 3. Metcalf DG, et al. Int Wound J 2017; 14: 203-213. 4. Malone M et al. 2017. JWC; 20-25.

* When compared to AQUACEL™ Ag Extra™ dressing and other silver-only competitor dressings: ACTICOAT™ 7 and SILVERCEL™ Non-Adherent dressings.

Pathways and Outcomes:

The Importance of Timely Interventions

By Sue Rosenthal, BA MA; Robert Ketchen, BASc ACIDO; and Mariam Botros, DCh IIWCC MEd

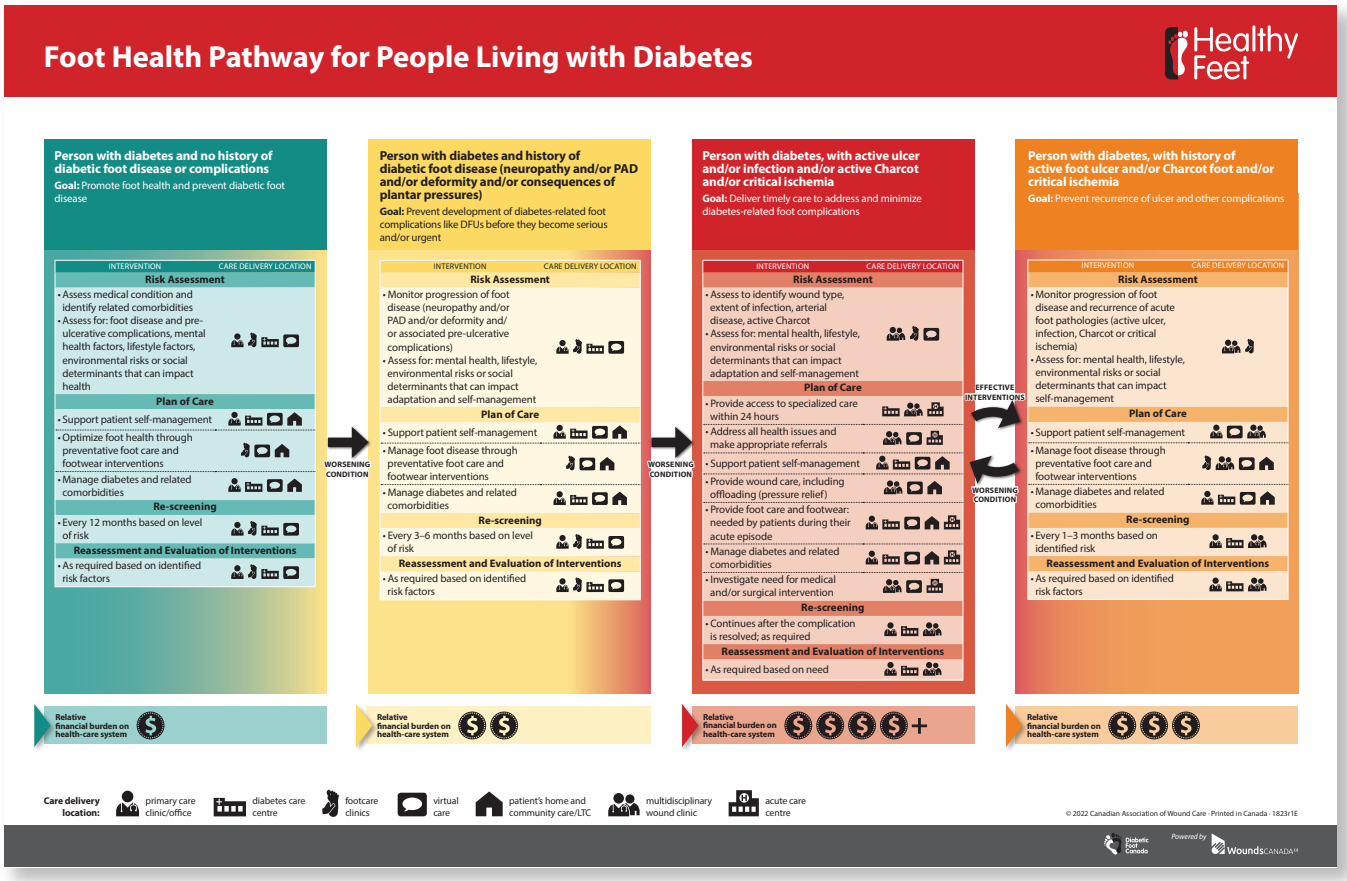
Wounds Canada has been developing care pathways that outline a risk-based approach focused on patient outcomes, experiences and value-based care consistent with population health principles. The aim of this approach is to support skin and general health by focusing on early interventions that prevent wounds and/or wound-related complications.

To date, two pathways have been completed: Foot Health Pathway for People Living with Diabetes (Figure 1) and Pathway for Preventing and Managing Vascular Wounds (Figure 2). The coloured domains are organized to assist in identifying an individual's specific risk and then recommend an appropriate care plan, using a holistic approach, complete with follow-up requirements. The green domain identifies interventions for patients at no or very low risk, yellow for patients at low risk, red for patients experiencing an acute wound-related episode, and orange for patients who are at a post-acute episode stage, such as

Learn More

To learn more about the pathways, please read "A Foot Health Pathway for People Living with Diabetes: Integrating a Population Health Approach"[6] and "Saving Limbs and Lives: Building Out an Ontario Lower-Limb Preservation Strategy,"[7] both in *Limb Preservation in Canada*, 2022, Vol 3, No 1.

Figure 1: Foot Health Pathway for People Living with Diabetes



Click here for a full-size version. A version of the pathway with an explanation can be found here: https://www.woundscanada.ca/docman/public/1828-diabetic-foot-complications-b-ltr-1823e-final/file.

those living with a healed wound who may be at risk for recurrence.

While based on international best practice standards, these pathways can be adapted to fit the needs and resources of any health jurisdiction, provided the general principles are met. As a tool for communicating to individuals, families, health providers, administrators, policy makers and funders, the pathways highlight the importance of risk screening followed by secondary and tertiary prevention using an integrated team approach that promotes skin health and prevents wounds and wound complications, including infections, slow or non-healing wounds, amputations, disability and death.

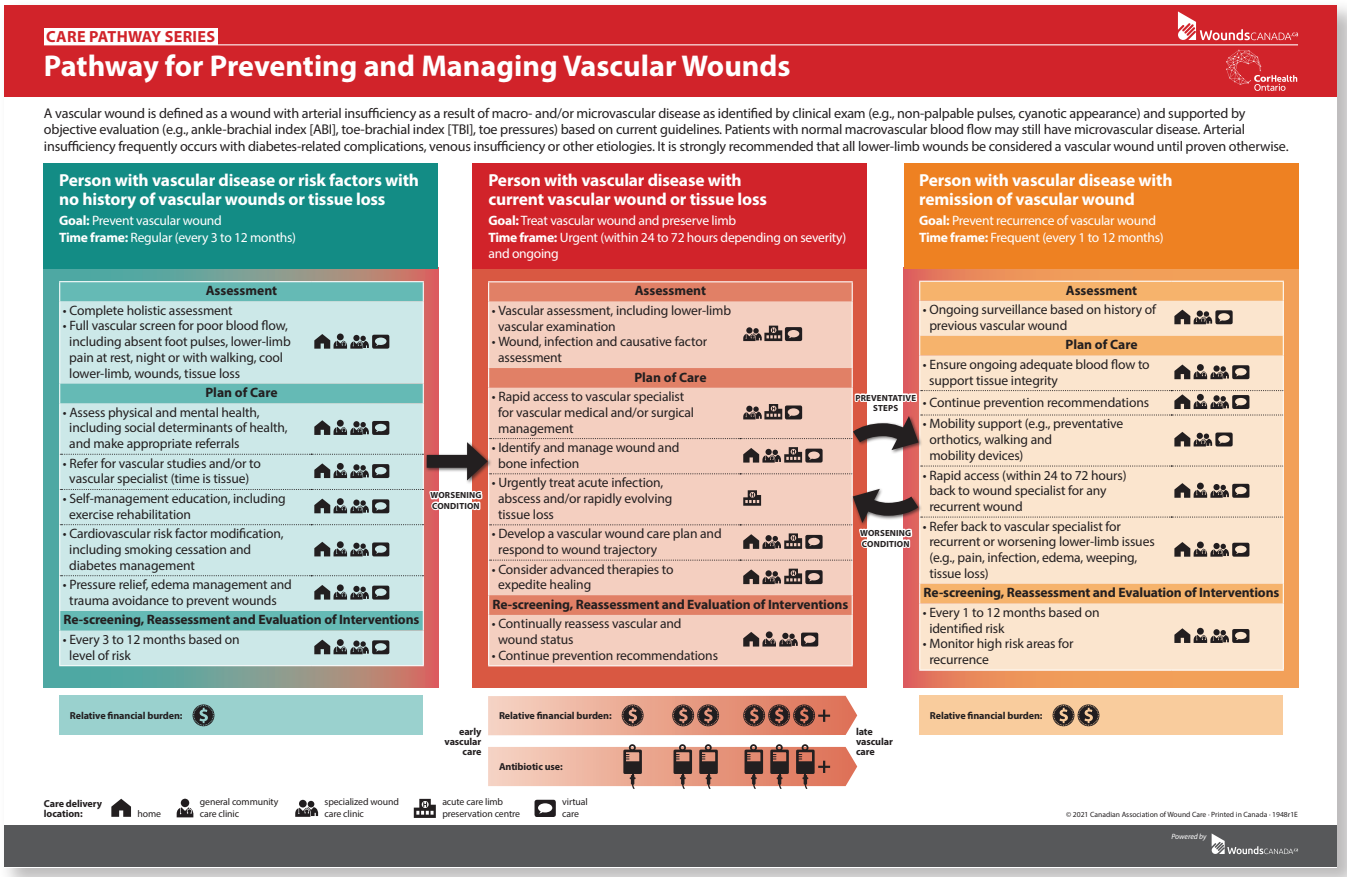
What follows are examples of the impact that the type and timing of decisions can have on outcomes for patients. These are "what if" scenarios and contrast the effect of early and appropriate interventions with late and/or inappropriate interventions. The results are striking.

The scenarios are based on a single patient newly diagnosed with diabetes, a common occurrence in Canada, as 30% of Canadians are currently living with diabetes or prediabetes.[1] They are designed to provide health-care professionals, policy makers funders and patients and their families with food for thought about how to improve outcomes for such patients.

Let's dive in

Every individual diagnosed with diabetes will have a health trajectory that follows its own unique path—one that depends on their general health, geographic location, income, social networks and personal decision making, among other factors.[2,3] One of the most important of

Figure 2: Pathway for Preventing and Managing Vascular Wounds



Click here for a full-size version.

these other factors is the type and timing of support they receive from their health-care provider (HCP) and health system.[4] This is true for all the implications that result from diabetes, including long-term foot health.

The initial and ongoing care patients with diabetes receive from their HCP can make the difference between a lifetime of healthy feet or chronic problems potentially leading to amputation and related premature death.

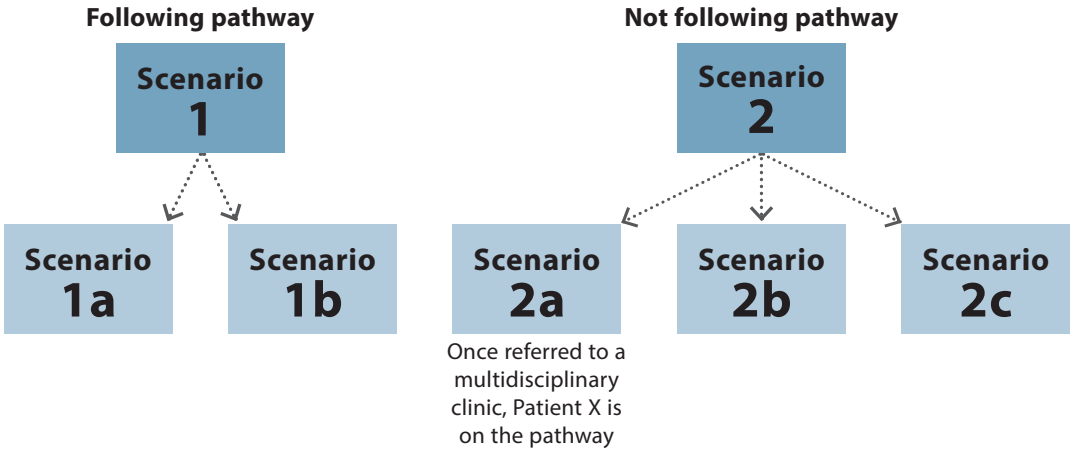
For those who receive the right types of interventions at the right time, foot health can be maintained, and complications can be prevented, minimized or addressed appropriately.[5]

The thought exercise that follows helps to illustrate how this might work by positing alternative scenarios for a patient diagnosed with diabetes mellitus by a family physician and what the benefits and consequences might be when different decisions are made—or not made. Figure 3 provides an overview of the five scenarios that stem from the same initial case, followed by Figure 4, which provides more detailed information about how the patient fared in each scenario.

References

1. Diabetes Canada. Diabetes in Canada: Backgrounder. Ottawa: Diabetes Canada; 2022. Available at: https://www.diabetes.ca/DiabetesCanadaWebsite/media/Advocacy-and-Policy/Backgrounder/2022_Backgrounder_Canada_English_1.pdf.
2. Peters EJ, Lavery LA, International Working Group on the Diabetic Foot. Effectiveness of the diabetic foot risk classification system of the International Working Group on the Diabetic Foot. Diabetes Care. 2001;24(8):1442–7.
3. Bus S, Lavery L, Monteiro-Soares M, Rasmussen A, Raspovic A, Sacco I, et al. Guidelines on the prevention of foot ulcers in persons with diabetes (IWGDF 2019 update). Diabetes Metab Res Rev. 2020;36(S1)e3269.
4. Rogers LC, Andros G, Caporusso J, Harkless LB, Mills JL Sr, Armstrong DG. Toe and flow: essential components and

Figure 3: Overview of the Alternative Scenarios
Patient X is diagnosed with diabetes mellitus by family physician.



structure of the amputation prevention team. J Vasc Surg. 2010;52(3 Suppl):23S–27S.

5. Botros M, Kuhnke JL, Embil J, Goettl K, Morin C, Parsons L, et al. Best practice recommendations for the prevention and management of diabetic foot ulcers. In Foundations of Best Practice for Skin and Wound Management. A supplement of Wound Care Canada; 2017. 68 pp. Available here.
6. Evans R, Kuhnke JL, Blanchette V, Botros M, Rosenthal S, Alleyne J, Costa IG. A foot health pathway for people living with diabetes: Integrating a popluation health approach. Limb Preservation in Canada. 2022;3(1):12–24.
7. Setterfield M, Scholey L. Saving Limbs and Lives: Building out an Ontario Lower-Limb Preservation Strategy. Limb Preservation in Canada. 2022;3(1):26–28.

Figure 4:
The situation: Patient X is diagnosed with diabetes mellitus by primary care practitioner.

Scenario 1

Key Decision Point:
Primary care practitioner works with patient to create a plan of care that includes:
- Diabetes management, focus on achieving diabetes targets, lifestyle modifications
- Regular follow-ups
- Referral to diabetes education centre to learn self-management strategies
- Foot screening, risk stratification and referrals as needed
- Annual follow-up for foot health monitoring to catch early signs of complications and implement interventions if needed (yellow domain)

1 YEAR

- Situation is unchanged

5 YEARS

- Situation is unchanged

Scenario 1a

Key Decision Point:
Ongoing evaluation indicates plan is working: plan continues

10 YEARS

- Situation unchanged

Consequence cascade:
- Patient X stays relatively healthy
- Good quality of life
- Continues with regular visits to primary care with regular foot screening and preventative foot care
- Normal lifespan

The Bottom Line:
- No undue additional burden on the health system

- Neuropathy is detected

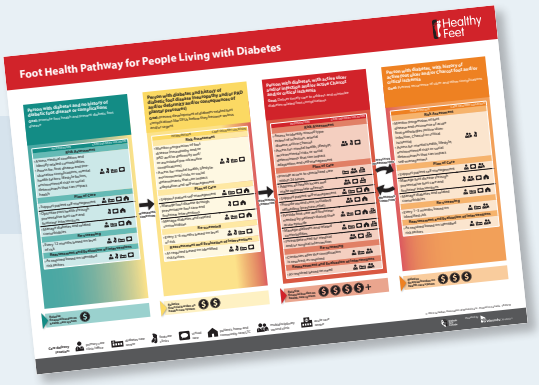
Scenario 1b

Key Decision Point:
- Increase frequency of screening to every 3 to 6 months
- Modify footwear recommendations

Consequence cascade:
- Patient X stays relatively healthy
- Continues with frequent visits to primary care practitioner and foot care specialists for duration of life
- Normal lifespan

The Bottom Line:
- Minor additional burden on the health system`

Notes:
- The colours in the infographic align with the colours of the pathway.
- Similar scenarios could be generated for the vascular pathway as well.



Scenario 2

Key Decision Point:

Primary care practitioner:
- Prescribes medication for blood glucose management and focuses on diabetes targets
- Schedules a follow-up for 6 months
- Does not refer for education or foot care
- Does not schedule regular foot-health monitoring

6 MONTHS

- Follow-up with primary care practitioner for blood glucose management and diabetes targets
- Told to get a glucometer and use it three times per day; blood glucose levels continue to rise

3 YEARS

Scenario 2a

- Comes back with foot ulcer; unaware because of lack of sensation (only discovered because of blood on the floor)

Key Decision Point:

Primary care practitioner:
- Refers patient to a multidisciplinary wound clinic (which puts Patient X back on the pathway)
- Wound is closed in three months
- Patient is monitored for recurrence and receives ongoing education in self-management for his diabetes and foot health

Consequence cascade:
- No ulcer recurrence
- Reasonably good QoL

The Bottom Line:
- Some additional burden on the health system but situation is under control

$$$

Scenario 2b

- Comes back with foot ulcer; unaware because of lack of sensation (only discovered because of blood on the floor)

Key Decision Point:

Primary care practitioner refers patient to home care for wound management

3.5 YEARS

- Wound has not healed; home care is ongoing

4.5 YEARS

- Wound has not healed; foot is now red and swollen so patient goes to emergency department

Key Decision Point:

Emergency personnel send patient home with antibiotics; but it's unrecognized Charcot; ulcer persists

5.5 YEARS

- Patient has visited emergency department twice more because the foot is not improving; receives more antibiotics; now acute Charcot with non-reversible changes

7.5 YEARS

- Eventually diagnosed correctly and patient has ongoing specialist appointments and care

Consequence cascade:
- Immobilized in a cast for two years
- Loses job
- Becomes deconditioned
- Poor mobility and poor social life
- Loses home

The Bottom Line:
- Heavy personal toll
- Heavy burden on the health system

$$$$+

Scenario 2c

- Comes back with foot ulcer; unaware because of lack of sensation (only discovered because of blood on the floor)

Key Decision Point:

Primary care practitioner refers patient to home care for wound management

3.5 YEARS

- Wound has not healed; home care is ongoing

4.5 YEARS

- Wound has not healed; toe is now black; patient goes to emergency department

Key Decision Point:

Emergency personnel refer patient to orthopedist for amputation; he is in hospital for 3 days

5.5 YEARS

- Another amputation, this time above the knee to manage necrosis; in hospital and rehab for 60 days, then referred to home care for 4 months

8.5 YEARS

- Patient dies

Consequence cascade:
- Loses job
- Poor QoL
- Loss of life to patient and loss of family member and friend

The Bottom Line:
- Loss of life
- Heavy burden on the health system

$$$$+

PRESSURE ULCERS ARE A PROBLEM.
WE OFFER A PROVEN SOLUTION.

Mepilex® Border Sacrum

Mepilex® Border Heel

Mepilex® Border Flex

Mölnlycke®

Limb Preservation Team Update: An Approach that Needs Patients and Their Families as Partners

By Virginie Blanchette, BSc MSc DPM PhD and David G Armstrong, DPM MD PhD

Professional collaboration for prevention, education and care results in a synergy with patients, organizations and the environment, positively influencing Bodenheimer's Quadruple Aim (Figure 1).[1,2] Bodenheimer's is a framework that supports person-centred care and has the essential characteristics of a high-quality health-care system. The Quadruple Aim is an extension of the Institute for Healthcare Improvement's Triple Aim Framework.[1] As a result, it facilitates the provision of high-quality care to complex wound cases, such as those associated with tissue loss due to diabetes and peripheral arterial disease,[3] because patients, their families and care partners become partners within the team.[4] It is an important component of limb preservation and patient-centred care.[5] Professional collaboration that results in a team approach is widely accepted in the clinical community, but it can be difficult to implement in practice.[6] The following highlights the fundamental concepts, such as the key elements and various definitions of the team approach, as well as the specific characteristics of the most recent published successes in limb preservation.

Figure 1: Bodenheimer's Quadruple Aim[2]

Key elements of professional collaboration

To begin, team members must have fundamental skills in understanding collaboration

Table 1: Basic skills for professional collaboration (Adapted from Interprofessional Health Collaborative Framework[2])

Role clarification
• Practitioners within the team understand their role and the roles of those in the team and use this knowledge appropriately to establish and achieve individual/patient/family/care partner and community* goals.
Team functioning
• Practitioners understand the principles of team dynamics and group/team processes to enable effective interprofessional collaboration.
Interprofessional communication
• Practitioners from different professions communicate with each other in a collaborative, responsive and responsible manner.
Individual/patient/family/care partner/community-centred care
• Practitioners seek out, integrate and value the input and the engagement of the individual/patient/family/care partner and community in designing and implementing care/services.
Interprofessional conflict resolution
• Practitioners actively engage self and others, including the individual/patient/family/care partner in positively and constructively addressing disagreements as they arise.
Collaborative leadership
• Practitioners understand and can apply leadership principles that support a collaborative practice model.

*An example of a community goal is: to be treated within the remote, Indigenous community as much as possible. For an Indian or Chinese community, it may be to be able to implement Ayurveda or traditional medicine as a part of the interprofessional collaboration.

in order to demonstrate knowledge, ability and behaviours for teamwork on the limb preservation team. As a result, a specific framework for interprofessional wound care teams is necessary.

Fundamental skills support team organization and communication, which in turn can improve patient engagement and empowerment in self-management.[3-5] In addition, for an optimal team approach, several other factors must be considered, such as the level of collaboration (such as information, consultation, collaboration, partnership), conflict resolution, member participation, the roles of each member and cohesion (see Table 1).[7,8] Indeed, studies have shown that the higher the level of team cohesion, the better the effects on health outcomes and patient satisfaction.[6,9] Setting specific measurable and achievable goals with measurable outcomes, a system of clinical and administrative organization, division of care based on individual expertise, training for all members and effective communication strategies are all key elements that enable cohesion in the health team. [8,10-12]

Definition of Team Approach

Another distinction regarding team approach is the terminology and meaning of each concept used to describe teamwork: multidisciplinary, interdisciplinary and transdisciplinary (see Figure 2). Even though this terminology is frequently used interchangeably, each term has its own definition. Unfortunately, these concepts and associated terminology continue to perplex practitioners as well as those who publish on the subject.[10,13] As a result, assessing the impact of the teams, particularly in limb preservation, is difficult.[14]

Each term denotes a distinct approach to team member integration and depth, as well as patient and public interactions and integration in relation to management and decision-making.[10-12]

A **multidisciplinary** team positions health disciplines in a complementary but not integrative way. As a result, the disciplinary perspectives are not changed within the team but rather contrasted with one another. The team works in parallel or sequentially from their specific disciplinary base to solve a common problem for the patient (for example, limb preservation or wound healing), which is a central preoccupation for all team members as well as families and care partners. Team members establish general, common goals and make their own decisions, and they may

ABSTRACT

Utility of sensor-based technology

Utility of a sensor-based technology to assist in the prevention of pressure ulcers: A clinical comparison

Rose Raizman, Minette MacNeil , Laurie Rappl
Int Wound J. 2018 Dec;15(6):1033-1044.

DOI: 10.1111/iwj.12974. Epub 2018 Aug 30

Aim: Detection of subcutaneous tissue damage before it is visible can trigger early intervention and decrease hospital-acquired pressure ulcer (HAPU) rates. The objective of this two-phase study was to evaluate the clinical utility of the Sub-Epidermal Moisture (SEM) Scanner (Bruin Biometrics (BBI), LLC), a hand-held device that assesses increases in interstitial fluid or sub-epidermal moisture, indicating early tissue damage.

Phase 1: Patients were provided standard-of-care risk assessment and interventions and were scanned with the SEMScanner, but the resulting SEM scores were not used to determine interventions. This gave a baseline pressure ulcer incidence rate.

Phase 2: This phase is the same as Phase 1, except the resulting SEM scores were used in conjunction with risk assessment scores to determine appropriate interventions and care planning.

Results: In Phase 1, 12 of the 89 subjects or 13.5% developed visible pressure ulcers — 4 Stage I's, 6 Stage II's, 1 Stage III, and 1 deep tissue injury. In Phase 2, 2 of the 195 subjects or 1.0% developed visible pressure ulcers — 1 Stage I and 1 Stage II. Patients in Phase 2 were more incontinent, less mobile, and had longer lengths of stay than those in Phase 1. Use of the Scanner resulted in a 93% decrease in HAPU.
No deep injuries developed in Phase 2.

Source: U.S. National Library of Medicine

Arjo Inc. · 2349 West Lake Street · Addison, Illinois 60101 · 800-323-1245 · www.arjo.us

Arjo Canada Inc. · 90 Matheson Blvd West, Suite 350 · Mississauga, ON, L5R 3R3 · 800-665-4831 · Info.Canada@arjo.com · www.arjo.ca

Book a Provizio SEM Scanner evaluation today.

CLICK HERE
Early & Targeted Intervention Kit (ETIK)

PRESSURE INJURY PREVENTION

Provizio SEM Scanner

Your 5-day*[1] window for timely and effective pressure injury (PI) intervention.

Provizio™ SEM Scanner empowers you with the ability to deliver objective and anatomically-specific PI risk assessment, ensuring a 5-day*[1] window of opportunity to deploy a targeted and tailored PI prevention strategy that helps minimise PI incidence and reduce overall cost and time to care.

- Objective PI risk assessment on admission and 5 days*[1] earlier, regardless of skin tone[2]
- Enable timely, anatomically-specific and targeted interventions
- Digitally enhance the PI care pathway and outcome

Provizio SEM Scanner has been demonstrated as an effective tool supporting the prevention of pressure injury when used as an adjunct to standard of care. The real-world evidence, gathered via a number of evaluations around the globe, show significant reductions in pressure injury occurrence across care settings:[3]

47% palliative care

90% acute care

27% community care

* Median

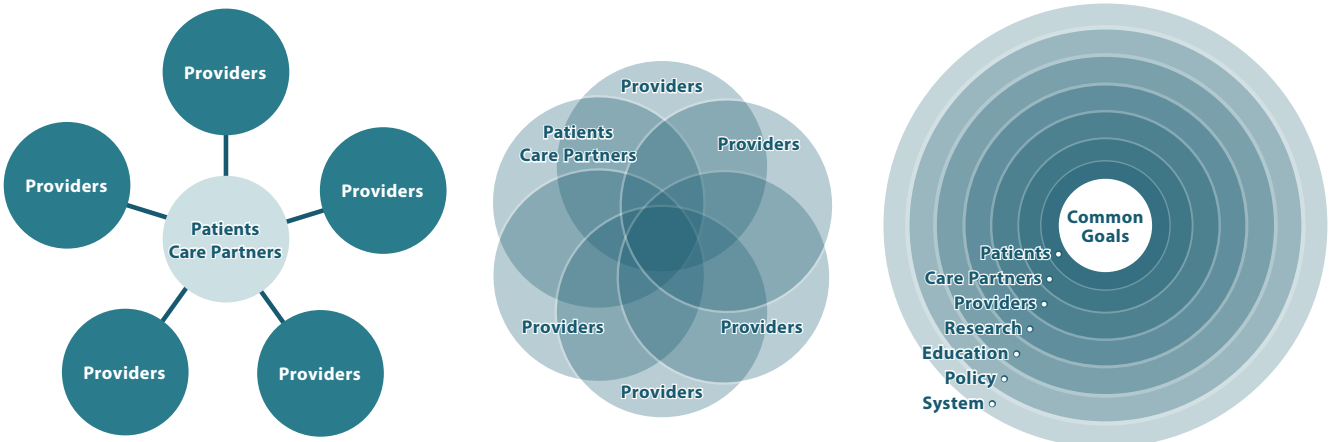
References
1. Okonkwo H, Bryant R, Milne J et al. A blinded clinical study using subepidermal moisture biocapacitance measurement device for early detection of pressure injuries. Wound Repair & Reg 2020;1-11.
2. Bates-Jensen BM, McCreath HE, Pongquan V. Sub-epidermal moisture is associated with early pressure ulcer damage in nursing home residents with dark skin tones: pilot findings. J Wound Ostomy Continence Nurs. 2009;36(3):277-284.
3. Burns M (2020). Reducing Pressure Injury/Ulcer through the introduction of Technology. Accepted and presented at EWMA Virtual Conference 2020.

Arjo Canada Inc. · 90 Matheson Blvd West, Suite 350 · Mississauga, ON, L5R 3R3 · 1-800-665-4831 · Info.Canada@arjo.com

www.arjo.com

arjo
EMPOWERING MOVEMENT

Figure 2: Differences in team approaches to care



Multidisciplinary **Interdisciplinary** **Transdisciplinary**

meet to discuss progress and care continuation as needed. The team may or may not be in the same physical location.

An **interdisciplinary** team is a collaboration of at least two or more health-care disciplines, resulting in a new level of discourse and knowledge integration related to limb preservation or wound care. These interdisciplinary efforts have the potential to create new limb preservation disciplines, as was the case with toe and flow model (podiatrists and vascular surgeons) (see Figure 3).[15] All team members collaborate—but always from a discipline-specific perspective—to solve common health issues that affect the patient (and their families/care partners). The team defines the goals, and the patient and their families are included as members because the team is providing patient-based prevention and care. At least one member within the team needs to co-ordinate patients' contributions to the plan as their goals, preferences and values have the same weight as those from the care providers. It is therefore a partnership between health professionals and the patient (and families and care partners) in a participatory, collaborative and co-ordinated approach to shared decision-making on health issues.

A **transdisciplinary** team approaches the patient holistically, providing subordinate disciplines with a comprehensive understanding of the system and its dynamics, including community, organization, scientists and policy makers. Teams, for example, use a common conceptual framework to solve a common problem, such as a national limb preservation strategy, by combining discipline-specific theories, concepts and approaches. Transdisciplinary teams share not only goals and decision-making, but also skills. Because of the integration and depth of interactions among team members, including all stakeholders at the micro (clinical), meso (organization) and macro (policy) levels, this is the most advanced level of team approach to care and prevention.[2,3] This approach is expected to result in better outcomes and higher quality of care.

Recent Stories of Success in Limb Preservation

The current literature reports on mainly multidisciplinary limb preservation efforts, and there is a high heterogeneity within and across all the reported data from those studies.[16] This is an important topic, and there is abundant literature on the concept of a team approach to limb preservation with some specific features for success outlined.

A systematic review in 2014[5] studied multidisciplinary teams in foot clinics. It reported that care delivery led to a reduced rate of amputations for patients with high risk of amputation due to the organization and improvement of the services offered.[7]

A systematic review from 2017[6] that focused on the results of teams for active diabetic foot ulcers demonstrated a reduction of the death rate, length of hospital stay, amputation severity and cost of care as well as improvement in quality of life and wound healing for this population. Keys to this success included the complementarity of all the related professions, especially relating to consultation with podiatrists, wound-specialist nurses and orthotists with the hospital-based team, and to early intervention and follow-up.[8]

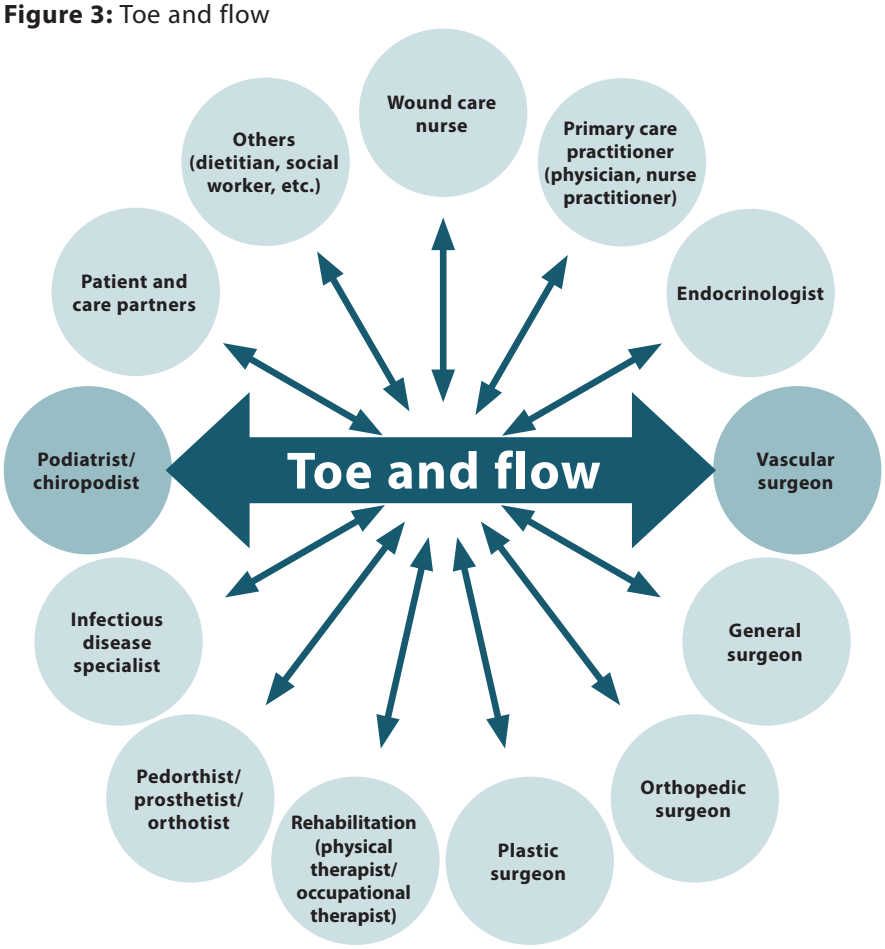
Recently, three systematic reviews[4,7,16] were published regarding a team approach to amputation. All the studies demonstrated that this approach reduces major amputation (below knee and above knee) rates.[4,7,16] The success of the team in one of the studies[16] was due to the combination of surgical and medical disciplines and to having a "captain" of the team integrated with nuclear and ancillary team members. Clear referral pathways and algorithms to support timely, comprehensive care relating to glycemic control, local wound management, vascular disease management and infection management were also highlighted as key success components.[9] One of the other studies focused particularly on the team, including podiatrists, and demonstrated a reduction of 55% of major amputation and 31% of minor amputations.[16] Podiatrists were mainly "gatekeepers," with vascular surgery and/or endocrinology within the team included in the review. The third review[7] found a similar major amputations rate reduction (36–56%) to those of the second study but also highlighted that at least four team members worked together within the limb preservation teams.

A systematic review from 2021[8] related to the impact of access to and the quality of diabetic foot care delivery in preventing amputations demonstrated the same results as the studies cited above but also highlighted the impact of the use of teams on prevention. The success of the team was due to many components, including:

- Enhanced health-care access by reducing distance to foot clinics and increasing the number of clinics
- Enhanced co-ordination (information and feedback)
- Enhanced level of knowledge and skills within the team
- Guideline implementation
- Improved chiropody/podiatry care access and increased numbers of those within the team
- Enhanced diabetic foot care service structure related to foot screening, foot care, education, footwear and clinical pathways
- High-quality care trajectories between community care and rapid access for emergencies[12]

Other studies that were not integrated in the previous systematic reviews showed similar results. In one, a team that focused on ischemic and diabetic wounds after vascularization or hospitalization demonstrated that the teamwork increased the performance of the vascular service in relation to limb preservation interventions (debridement and endovascular bypass) and reduced major amputation rates. Their success was apparently based on a reduction in variability of follow-up between vascular surgeons, primary care and home nursing, a strong core team and co-ordinated care management, the implementation of wound-specific medical records and a weekly case discussion within the team.[12] Another study of a team with a focus on chronic limb-threatening ischemia demonstrated that patients treated within the team increased the length of time they lived without major amputation. Specific features of their success in their ambulatory vascular limb salvage service clinic were also based on the implementation of dedicated referral pathways and treatment protocols where all referrals can be made by any health-care professional, an open access policy where clinical suspicion of chronic limb-threatening ischemia was the only referral criterion, the implementation of the Wounds, Ischemia and foot Infection (WIfI) classification for the risk of amputation and revascularization benefits[13] and to weekly "complex peripheral" team meetings.[14] Limb preservation for all non-vascular etiologies (including trauma and infection) has demonstrated a reduction

Figure 3: Toe and flow



Modified from Rogers and colleagues[22]

of 76% of amputations because all specialties (orthopedic and plastic surgeons, rehabilitation staff, podiatrists and wound care led by vascular surgeons) were meeting quarterly and all specialties were consulted before the amputation.[15]

In Canada, there have been recent successes in using a team approach in limb preservation. For example, the first toe and flow model was implemented in Calgary, with a resulting reported reduction in amputation over the years.[17] In addition, another multidisciplinary team was implemented in Ontario, and the authors highlighted the importance of having all specialties in the same location, the benefits of having a person with experience in charge (or co-ordinator) to co-design the structure and the process of the program, and how essential it is to ensure the sustainability of funding.[18] In Quebec, interdisciplinary wound clinics with a strong focus on limb preservation have been developed and demonstrate positive outcomes. Those teams have focused on the importance of partnership with a vulnerable population,[19] in-place infrastructure academic collaboration,[20] and community wound care.[21]

Transdisciplinary Teams

Transdisciplinary limb preservation teams do exist. A recent study has reported the effect of the team approach to virtual diabetic service to improve access to care and education for diabetic foot disease.[23] The authors found that this approach led to increased patient engagement, decreased major amputation rates, reduced hospitalization rates and fewer unnecessary hospital visits. This was based on:

- Co-design of the service by users and through consultation on "what the community wants"
- Better support for primary care
- Improved access and timely referral to podiatrists
- Improved access to healthy lifestyle supports
- The understanding of "what matters to me" at the system level
- Enhanced diabetes care at home

Conclusion

A collaborative approach to limb preservation is universally beneficial. There are trends that characterize the success of these teams, and future research and advocacy should focus on how we can implement team-based limb preservation as a national strategy. However, the successes reported thus far have also revealed a lack of integration of patients and caregivers as partners within the team. We can maximize the potential of a

team approach in limb preservation in Canada and elsewhere by working together and using our best interprofessional collaboration skills. Patients, their families and care partners are partners within the team and are well positioned to take charge of their own health if and only if they have a space to do so.

References

1. Berwick DM, Nolan TW, Whittington J. The Triple Aim: Care, health, and cost. Health Aff. 2008;27(3):759-769.
2. D'Amour D, Ferrada-Videla M, San Martin Rodriguez L, Beaulieu M-D. The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks. J Interprof Care. 2005;19(sup1):116–31.
3. Watt A, Beacham A, Palmer-Mann L, Williams A, White J, Brown R, et al. Service user and community clinician design of a partially virtual diabetic service improves access to care and education and reduces amputation incidence. BMJ Open Diabetes Res Care. 2021;9(1).
4. Pascucci D, Sassano M, Nurchis MC, Cicconi M, Acampora A, Park D, et al. Impact of interprofessional collaboration on chronic disease management: Findings from a systematic review of clinical trial and meta-analysis. Health Policy. 2021;125(2):191–202.
5. Kangas S, Rintala T-M, Jaatinen P. An integrative systematic review of interprofessional education on diabetes. J Interprof Care. 2018;32(6):706–18.
6. Szafran O, Kennett SL, Bell NR, Torti JM. Interprofessional collaboration in diabetes care: Perceptions of family physicians practicing in or not in a primary health care team. BMC Fam Prac. 2019;20(1).
7. Quinlivan E, Jones S, Causby R, Brown D. Reduction of amputation rates in multidisciplinary foot clinics – A systematic review. J Aus Wound Manag. 2014;22(3):155.
8. Buggy A, Moore Z. The impact of the multidisciplinary team in the management of individuals with diabetic foot ulcers: A systematic review. J Wound Care. 2017;26(6):324–39.
9. Musuuza J, Sutherland BL, Kurter S, Balasubramanian P, Bartels CM, Brennan MB. A systematic review of multidisciplinary teams to reduce major amputations for patients with diabetic foot ulcers. J Vasc Surg. 2020;71(4).
10. Albright RH, Manohar NB, Murillo JF, Kengne LA, Delgado-Hurtado JJ, Diamond ML, et al. Effectiveness of multidisciplinary care teams in reducing major amputation rate in adults with diabetes: A systematic review & meta-analysis. Diabetes Res Clin Pract. 2020;161:107996.
11. Monteiro-Soares M, Vale-Lima J, Martiniano J, Pinheiro-Torres S, Dias V, Boyko EJ. A systematic review with meta-analysis of the impact of access and quality of diabetic foot care delivery in preventing lower extremity amputation. J Diabetes Complicat. 2021;35(4):107837.
12. Flores AM, Mell MW, Dalman RL, Chandra V. Benefit of multidisciplinary wound care center on the volume and outcomes of a vascular surgery practice. J Vasc Surg. 2019;70(5):1612–9.
13. Mills JL, Conte MS, Armstrong DG, Pomposelli FB, Schanzer A, Sidawy AN, et al. The Society for Vascular Surgery Lower Extremity threatened limb classification system: Risk stratification based on wound, ischemia, and foot infection (WIFI). J Vasc Sur. 2014;59(1).
14. Nickinson AT, Dimitrova J, Houghton JS, Rate L, Dubkova S, Lines H. Does the introduction of a vascular limb salvage service improve one year amputation outcomes for patients with chronic limb-threatening ischaemia? Eur J Vasc Endovascu Surg. 2021;61(4):612–619.
15. Hemingway J, Hoffman R, Starnes B, Quiroga E, Tran N, Singh N. The impact of a limb preservation service on the incidence of major amputations for all indications at a level I trauma center. Ann Vasc Surg. 2021;70:43–50.
16. Blanchette V, Brousseau-Foley M, Cloutier L. Effect of contact with podiatry in a team approach context on diabetic foot ulcer and lower extremity amputation: Systematic review and meta-analysis. J Foot Ankle Res. 2020;13(1).
17. Basiri R, Haverstock BD, Petrasek PF, Manji K. Reduction in diabetes-related major amputation rates after implementation of a multidisciplinary model: An evaluation in Alberta, Canada. J Am Podiat Med Assoc. 2019;111(4).
18. Roberts DJ, Murphy C, Strauss SA, Brandys T, Corrales-Medina V, Zhang J, et al. Structure, processes, and initial outcomes of The Ottawa Hospital Multi-Specialist Limb-Preservation Clinic and Programme: A unique-in-Canada quality improvement initiative. Int Wound J. 2021;19(2):326–38.
19. Fournier C, Singbo N, Morissette N, Thibeault M-M. Response to "outcomes of diabetic foot ulcers in a tertiary referral interdisciplinary clinic: A retrospective Canadian study." Can J Diabetes. 2021;45(7):579.
20. Blanchette V, Hains S, Cloutier L. Establishing a multidisciplinary partnership integrating podiatric care into the Quebec public health-care system to improve diabetic foot outcomes: A retrospective cohort. The Foot. 2019;38:54–60.
21. Patry J, Tourigny A, Mercier MP, Dionne CE. Outcomes and prognosis of diabetic foot ulcers treated by an interdisciplinary team in Canada. Int Wound J. 2020;18(2):134–46.
22. Rogers LC, Andros G, Caporusso J, Harkless LB, Mills JL, Armstrong DG. Toe and flow: Essential components and structure of the amputation prevention team. J Vasc Surg. 2010;52(3).
23. Watt A, Beacham A, Palmer-Mann L, Williams A, White J, Brown R, et al. Service user and community clinician design of a partially virtual diabetic service improves access to care and education and reduces amputation incidence. BMJ Open Diabetes Res Care. 2021;9(1).

3M Science. Applied to Life.™

A recently published meta-analysis suggests 3M™ Veraflo™ Therapy could become your new standard of care.

A meta-analysis of 13 studies with 720 patients reported Veraflo Therapy had a significant effect on clinical outcomes when compared to standard of care including 3M™ V.A.C.® Therapy.

Length of therapy **reduced** by **more than half**
(9.88 days vs 21.8 days, p=0.02)[1,2]

>2X

Wounds were **2.39 times more likely to close**
(p=0.01)[1]

You know the science behind V.A.C.® Therapy.

Now, know the data behind Veraflo Therapy.

To learn more about why you should **Start Smart** with Veraflo Therapy, please contact your local Sales Executive or visit 3M.ca/connect

References:

1. Gabriel A, Camardo M, O'Rorke E, Gold R, Kim PJ. Effects of Negative-Pressure Wound Therapy With Instillation versus Standard of Care in Multiple Wound Types: Systematic Literature Review and Meta-Analysis. *Plast Reconstr Surg*. 2021 Jan 1;147(1S-1):68S-76S. doi: 10.1097/PRS.0000000000007614. PMID: 33347065.
2. Camardo, Mark. "Veraflo Meta-Analysis Standardized and Non-Standardized Means.", 3M Internal Report, San Antonio, Texas, 2020.

Available in Canada from your authorized 3M-KCI distributors.
KCI USA, Inc., a 3M Company
KCI owned and operated by 3M Company

KCI Medical Canada Inc.
75 Courtneypark Dr W, Unit 4
Mississauga, ON
L5W 0E3

KCI USA, INC.
12930 IH 10 West
San Antonio, TX
78249

NOTE: Specific indications, contraindications, warnings, precautions and safety information exist for these products and therapies. Please consult a clinician and product instructions for use prior to application. This material is intended for healthcare professionals.

WoundsCANADA Institute

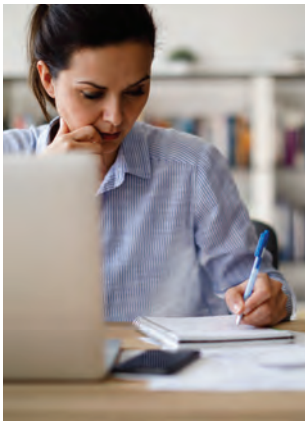
Pick Your Path

3 Three pathways to gaining the knowledge and skills you need to improve your wound care practice

Option 1. Quick and Easy

8–9 HOURS TO COMPLETE

The Best Practice Approach to Skin Health and Wound Management: Knowledge (A100MNN) program is designed to deliver the essentials on how to prevent and manage skin breakdown that results in the most common types of wounds, such as diabetic foot ulcers, leg ulcers, pressure injuries and surgical wounds. **Check out our other short-duration programs.**



- 7 online modules

Certificate of Completion from Wounds Canada.

Option 2. Be SHARP

SHARP
Skin Health Advocate and Resource Professional

45 HOURS TO COMPLETE

Wounds Canada Institute Super Program #1 (FCM20512-C), also known as the SHARP program, is a deeper dive into wound prevention and management for those looking to increase their specialized knowledge in wound prevention and management.

- 23 online modules
- 8 synchronous webinars
- 2 practical assignments
- Faculty-facilitated online discussion forum

Certificate of Completion in Continuing Professional Development from Continuing Professional Development, Faculty of Medicine, University of Toronto, and Wounds Canada.

COMING IN FALL 2022:

Option 3. Become a Champion

90 HOURS TO COMPLETE

If you're looking to become a wound leader and change maker, the Wound Care Champions program will be the one for you. This program will combine the SHARP Super Program #1 (above) with a rigorous set of learning and practice components, designed and delivered jointly with the Registered Nurses' Association of Ontario. Get a jump on this program by completing the SHARP Program now.

- Online modules
- Synchronous webinars
- Practical assignments
- In-person skills labs
- Faculty-facilitated online discussion forum
- An objective structured clinical examination (OSCE)

Certificate of Completion from Wounds Canada and the Registered Nurses' Association of Ontario (RNAO) and a Best Practice Champions Certificate from the RNAO.

Visit **www.WoundsCanadaInstitute.ca** for more information!

Wounds Canada has been delivering best-practice-based education for clinicians since 1995. The Wounds Canada Institute programs are designed to provide flexible, interprofessional education that supports the learning needs of different types of health-care professionals in a convenient, economical format.

Powered by WoundsCANADA.ca