

# Report on A Nation Under Pressure: Canadian Pressure Injury Summit



Crucial conversations to improve patient outcomes bringing together government, administrators, clinical leaders, patients, and industry in Toronto, Ontario.

NOVEMBER 18, 2024

In partnership with

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## Acknowledgments

We wish to acknowledge that we are on the territorial homeland of the many diverse First Nation, Metis, and Inuit people whose ancestors have walked these lands before us, and those whom we share this great land with today.

In partnership with



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John Gregory, IIWCC, ISWA, Opencity Inc., produced these summit proceedings.

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# Contents

- Introduction..... 1
- Nursing Change to Support A Nation Under Pressure ..... 3
- The Canadian Pressure Injury Landscape:  
Strategies to Address Health Care System Issues ..... 5
- In Their Own Voices:  
Addressing the Challenges Related to Pressure Injury Care..... 8
- Research on Nursing Workload and Pressure Injuries ..... 11
- Pressure Injury Experience: A Patient Voice..... 14
- Addressing the Gaps in the Surgical  
Management of Pressure Injuries ..... 15
- Group Discussion on Strategic Priorities..... 18
- Call to Action in Relieving the Nation Under Pressure ..... 19
- Glossary and Abbreviations ..... 21
- Recommended Resources ..... 21
- Appendix – Summit Agenda..... 22
- Industry in Action..... 23
- References ..... 24

# Introduction

Pressure injuries are complex, hard-to-heal wounds that have detrimental impact on the quality of life of affected persons, their caregivers, and the health care system at large. Prevention is key to stopping these wounds before they become a burden on us all.

**“[P]rimary prevention has the potential to save scarce resources and should begin among high-risk individuals in hospital, in a setting with established policies, structures and monitoring mechanisms, and may help to prevent the progression of early stage ulcers. It may also reduce the burden of care of discharged patients in the community,” Stacy Ackroyd-Stolarz.<sup>1</sup>**

The quote above from the commentary in the 2014 Canadian Medical Association Journal is disturbing in reminding us that 10 years later we are still navigating the same crucial conversations. That is why establishing the Canadian Pressure Injury Advisory Panel (CPIAP) was so important. Dr. Ackroyd-Stolarz also notes that “an essential ingredient for strengthening system-level prevention efforts is ongoing monitoring.”<sup>1 p. e370</sup> Though the commentary focused on persons at high risk for pressure injury development, individualized preventative care planning should promptly be initiated for any person with contributing factors that make them at risk of pressure injuries.

It seems fitting that Pam Hubley, Vice President of Health Disciplines and Chief Nurse Executive at University Health Network (UHN), welcomed attendees to this first CPIAP Canadian Pressure Injury Summit in partnership with UHN, to delve into examining pressure injury prevention and management. She noted how a united approach is the only path forward in advocating for meaningful change.

**“I remember, as a nurse, I learned so much about the importance of wound healing from my dietitian colleagues. I learned so much about the importance of pressure points, and whether it was splints or wheelchairs or other opportunities that we needed to pay more attention to because patients needed to be protected from these pressure injuries. It was so important to really listen to each other, to have the whole team come together to talk about the best way to care for patients, and of course, the nursing care that was required on a daily basis to prevent by turning patients, by attending to skin care by really paying attention to the needs of the individual patient,”**  
– Pam Hubley.



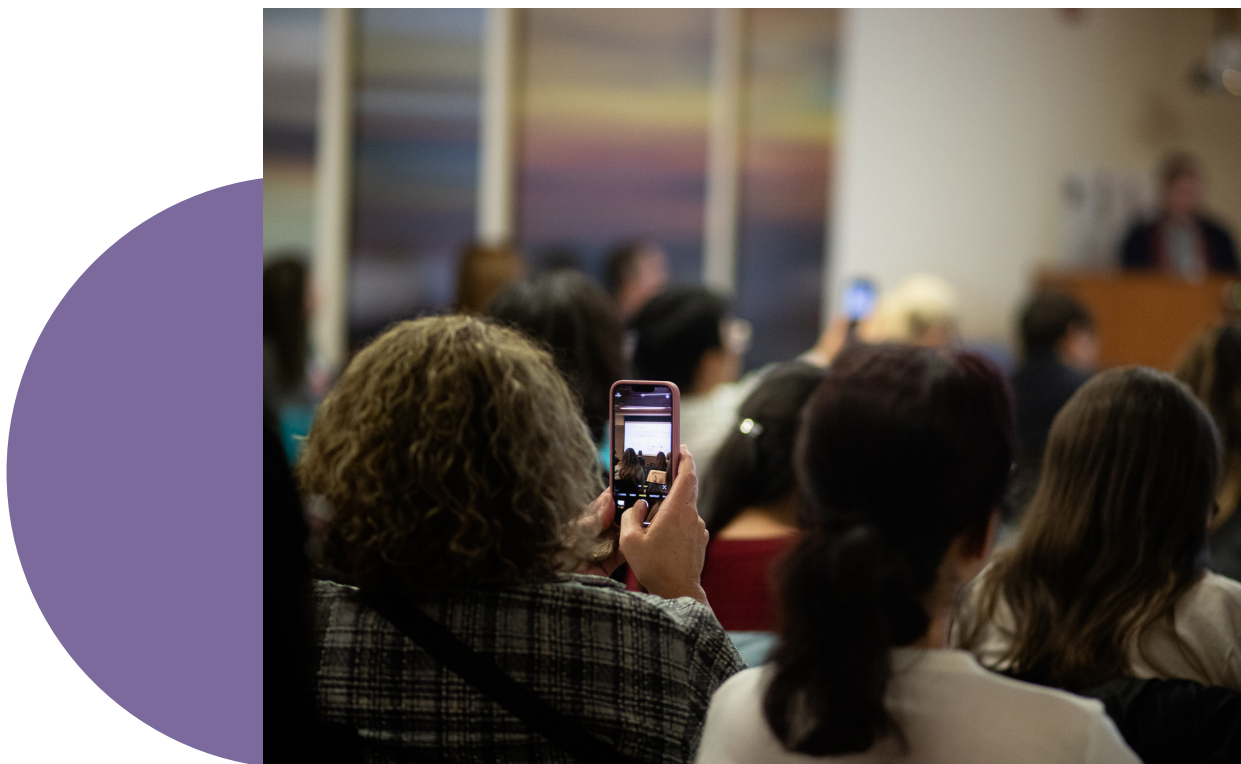
Pam Hubley, MSC, BSCN, RN

The summit coincided with both Worldwide Pressure Injury Prevention Day, an initiative started in Europe in 2011, and the publication of the new Registered Nurses' Association of Ontario 4<sup>th</sup> edition guidelines *Pressure injury management: Risk assessment, prevention and treatment*.<sup>2</sup> The summit had 300 attendees representing clinicians, health care leaders, decision makers, industry representatives, as well as persons and caregivers with lived experience of pressure injuries.

## ABOUT CPIAP

To address the national issue of pressure injuries in Canada, the CPIAP was formed in 2021, bringing together an interprofessional, nationwide panel of experts in pressure injury prevention and management, as an official interest group under Nurses Specialized in Wound, Ostomy and Continence Canada (NSWOCC). This pan-Canadian panel serves in a national advisory role and is represented by a cross section of health care professionals and researchers from different health care sectors from acute care to the community. Through organized workstreams, CPIAP supports making pressure injuries a national priority, drives standardization, advocates for policy solutions, and optimizes knowledge translation.

CPIAP is committed to seeing a Canada united in pressure injury prevention, management, and policy.



# Nursing Change to Support a Nation Under Pressure

Leigh Chapman, PhD, RN

Federal Chief Nursing Officer Dr. Leigh Chapman remarked upon the theme of unity through this first Canadian pressure injury summit. Approximately 477,000 nurses across Canada work, exist, play, and operate in an interprofessional sandbox. Health care delivery is about optimizing what is best for the patient and what is best for the provider. Dr. Chapman addressed the important role that nurses play in advising on policy issues that impact the health workforce.

“Nursing retention is a global nursing challenge,” commented Dr. Chapman. “We cannot recruit our way out of this crisis. We need to look at it differently.” One of the signature initiatives from Dr. Chapman’s office is the Nursing Retention Toolkit (see Figure 1), which was developed through pan-Canadian collaboration.<sup>3</sup> The codeveloped Nursing Retention Toolkit was developed in a June 2023 forum and launched in March 2024.

The toolkit focuses on eight core themes that impact a nurse’s day-to-day working life in the domain of clinical care. It provides corresponding tools that Canadian employers can implement. It was created in the context of interdisciplinary team-based care environments. The circle emphasizes that no one core theme is more important than any other. The values of respect, transparency, anti-racism and anti-oppression, and accountability underpin each core theme. Examples are provided on the webpage, where progress is already being made in organizations and health authorities across Canadian provinces and territories. The goals and initiatives of each core theme are presented sequentially in the toolkit.

Dr. Chapman’s presentation stimulated many questions from summit participants on the dissemination plan for the Nursing Retention Toolkit, as well as standards of care around wound care, nurse specialization, the broader impact of social determinants of health, and patient outcome-directed research around pressure injuries.<sup>3</sup> The retention toolkit themes apply to many other health care professionals. The importance of patient voices was highlighted to decision makers.



Leigh Chapman, PhD, RN

**“If you don’t actually have an adequate workforce, you’re going to have negative patient outcomes,”**  
– Dr. Leigh Chapman.

**Figure 1** Nursing Retention Toolkit



Note. From Health Canada. "Nursing retention toolkit: improving the working lives of nurses in Canada" by Health Canada.<sup>3</sup> Reproduced with permission.

In conclusion, Dr. Chapman encourages everyone to:

- disseminate the Nursing Retention Toolkit developed by the Government of Canada to organizational leaders and encourage its implementation; and
- continue to advocate for a national strategy or program to support interventions for patients with advanced pressure injuries that are difficult to heal.

# The Canadian Pressure Injury Landscape: Strategies to Address Health Care System Issues

## Chester Ho, MD

Pressure injuries do not have the level of recognition warranted and are described by Dr. Chester Ho as a silent epidemic. It has long been viewed that pressure injuries provide a barometer of care. In most instances, they are avoidable. He clearly articulated why this is a system issue and demands a pan-Canadian approach to address gaps and improve patient outcomes.

### QUICK FACTS

- 26% prevalence of pressure injuries across all Canadian health care institutions from a landmark study<sup>4</sup>;
- 10% prevalence in acute care based on Ontario health administrative data<sup>5</sup>;
- >US\$26.8 billion spent in the United States on hospital-acquired pressure injury<sup>6</sup>;
- US\$129,248 costs associated with hospitalization for a severe pressure injury in the United States<sup>7</sup>;
- CAN\$7,000–CAN\$9,000/month for pressure injury in persons with SCI in Canadian home care<sup>8</sup>; and
- CAN\$44,000 (Stage 2) to CAN\$90,000 (Stage 4) for older adults with hospital-acquired pressure injury.<sup>8</sup>

A global systematic review and meta-analysis with a sample of more than 2.5 million patients provides robust evidence that pooled pressure injury prevalence in hospitalized patients is 12.8%.<sup>9</sup> The authors conclude that this “provides a foundation for planning future care delivery, hospital resource allocation and promoting prevention intervention to reduce pressure injury”<sup>9</sup> p. 103456

There is copious anecdotal evidence in Canada. Sadly, the last Canadian national study was in 2004. More data is needed to demonstrate that pressure injuries should be prioritized based on their prevalence and cost. Much of our best evidence in the prevalence, incidence, and cost of pressure injuries noted in the quick facts are dated. In addition to these studies examining the direct costs to the health care system, it is imperative to reflect on the indirect costs to patients and families.



Chester Ho, MD



Dr. Ho remarked that we have no lack of clinical guidelines and recommendations on pressure injuries at a national or provincial/territorial level. There is a massive duplication of effort, with multiple organizations spending time and effort to develop pressure injury prevention and management initiatives. Table 1 summarizes some of the jurisdictional practices. In a system where we are resource constrained, we must join forces and expertise to work together in a concerted effort.”

**Table 1 Selected Jurisdictional Examples Practices in Pressure Injury Prevention and Management**

| Jurisdic-tions | Guidelines  | Practices  | Reporting  | Penalties              |
|----------------|---|--|--|------------------------|
| Canadian       | Wounds Canada BPR <sup>10</sup> and Guidelines for people with a SCI <sup>11,12</sup> | Accreditation Canada ROP <sup>13</sup> and HEC hospital harm reduction practices <sup>14</sup> |  |                        |
| Provincial     | CLWK website guideline in BC or Ontario–RNAO Guidelines <sup>2</sup> in Ontario       | Skin and Wound Committees in BC & Alberta or Project ECHO Skin & Wound in Ontario              | Critical or mandatory incident reporting guidelines for Stage 3 & 4 pressure injuries in Manitoba or Nova Scotia |                        |
| USA            | International Guidelines <sup>15</sup>  | AHRQ toolkit   |  | CMS HAPI reimbursement |

Note. AHRQ = Agency for Healthcare Research and Quality, BC = British Columbia, BPR = best practice recommendations, CLWK = connecting learners with knowledge, CMS = Centers for Medicare and Medicaid Services, ECHO = Extension for Community Healthcare Outcomes, HAPI = health care-acquired pressure injury, HEC = Healthcare Excellence Canada, RNAO = Registered Nurses’ Association of Ontario, ROP = required organizational practice, SCI = spinal cord injury.

Dr. Ho argues that system change requires a combination of both carrot and stick approaches. Health care-acquired pressure injury rates have declined in jurisdictions such as Nova Scotia, where reporting Stage 3 and 4 pressure injuries is mandatory. The United States *never events* introduced in 2008 whereby the Centers for Medicare and Medicaid Services (CMS) no longer reimburse organizations for health care-acquired pressure injuries. It prompted widespread system change.

The formation of CPIAP should provide optimism combined with the intellect and passion of many health care professionals across all

**“I still remember when I was in a panel discussion in Alberta, so we all agree that patient-centred care in pressure injury management is important. Everybody nodded their heads. Everyone said yes, so I asked the question, “Tell me, what does it mean to you? What behaviour do you need to demonstrate to be patient centred for pressure injury management?” Silence. Because we agree on the principle, but what do we do about it is a different story. It was a nice reminder for me that we still have to do a lot more, because while we actually really agree with this in principle, but how do we acknowledge, and not just acknowledge, but to carry out the practice that’s patient centred,”**  
**– Dr. Chester Ho.**

provinces and territories. CPIAP is positioned to support pressure injury national initiatives to drive a unified strategic approach. An effective national pressure injury strategy will improve the quality of life of patients and families and reduce hospital length of stay and overall costs.

In summary, Dr. Ho urges us all to:

- make avoidable pressure injury management a priority in our system to address this silent pandemic;
- develop a national framework that avoids duplication of effort;
- establish a national data strategy for pressure injuries built upon standardized documentation to address the disconnect between measurable outcome data and quality improvement initiatives;
- focus on pressure injury professional education at all levels that includes physicians; and
- drive accountability with a combination of a carrot and stick approach.

Dr. Chester Ho proved why he was the ideal clinician and researcher to deliver a state of the Canadian health care system.

**“I want to impress upon you that pressure injuries are prevalent and costly, and I call that a silent pandemic in our system. They are largely preventable, but system issues can pose barriers to effective management by clinicians, and there is an opportunity for us to develop a national framework for pressure injury strategy. When effective this strategy will improve the quality of life of patients and families, reduce hospital length of stay, and overall costs. And I think that the CPIAP is in a very good position to support these initiatives,”**  
– Dr. Chester Ho

# In Their Own Voices: Addressing the Challenges Related to Pressure Injury Care

Sharon Gabison, PhD, MSc, BScPT, BSc, IIWCC



Sharon Gabison, PhD, MSc,  
BScPT, BSc, IIWCC

Dr. Sharon Gabison shone a spotlight on the lived experience of those with pressure injuries. She paid tribute to a few of those who have adorned our media: Bob Wilson, Ken O’Leary, Norman Meunier, Georgina Dodds, Chrissy Dunnington, and so many individuals who unfortunately have succumbed to pressure injuries in Canada.

Research pending publication explores four themes: (a) accessing information, (b) factors considered when accessing and utilizing pressure injury information, (c) emotional responses related to their pressure injury, and (d) behaviours when experiencing a pressure injury.<sup>16,17</sup>

Health care professionals identified the challenges of and facilitators for pressure injury prevention and management, including patient, health care provider, client, and health care system factors.<sup>18</sup>

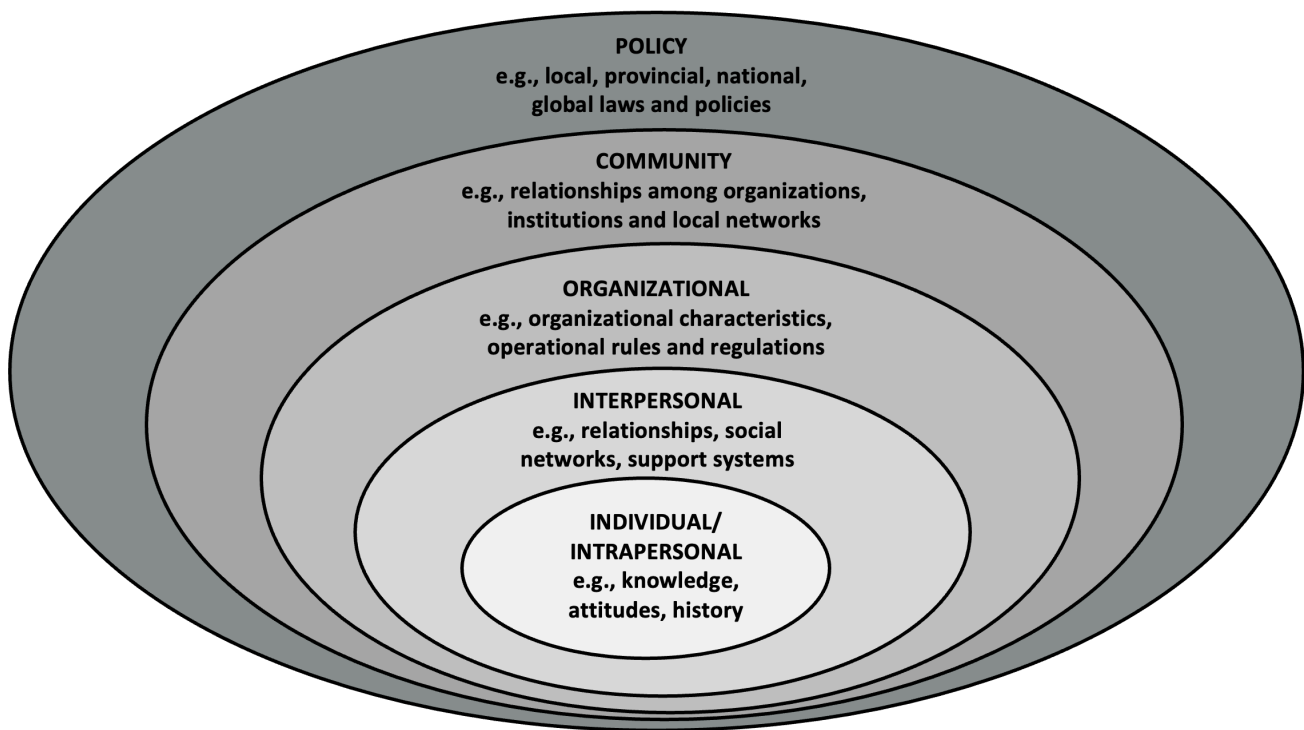
Health care professionals identified facilitators for pressure injury prevention and management and made concrete recommendations for improving patient and caregiver education. They recognized knowledge gaps in providing prevention and management strategies. Furthermore, these are compounded by health system factors as well, including a lack of interprofessional staffing and a lack of funding.

The social ecological model is a conceptual framework that shows how various factors influence an individual’s health and well-being. The model initially developed by Bronfenbrenner in the 1970s and adapted later is shown in Figure 2.<sup>19,20</sup> The social ecological model recognizes multiple relationships between the individual, the social network, the organizations they interact with, their community, and policy. Additionally, it emphasizes that the care environment comprises multiple levels and that factors at one level can influence another. Dr. Gabison suggests that successfully preventing and managing pressure injuries requires action at multiple levels simultaneously.

**“I’m sorry for making you more sad today, but this is a true story. And really, how did this happen? How could something like this happen in a first-class country that delivers first-class medical care, and how is it that a family did not know that their loved one had such a severe pressure injury when they were with him every single day, holding his hand? Even more importantly is why did this happen and how do we as health care professionals, hospital administrators, policymakers, allow this to happen over and over and over and over and over and over again,”**

**– Dr. Sharon Gabison.**

**Figure 2** Social Ecological Model



Note. Reproduced with permission of Dr. Gabison.

A pathway towards a solution is to listen to those with lived experience of pressure injuries, allowing these individuals to guide the health care system towards realistic actions.

A new study with Praxis, Canadian Institute of Health Research (CIHR), NSWOCC, and CPIAP is working towards understand the experiences of persons affected by pressure injuries in Canada. It examines the intrapersonal, interpersonal, and organizational challenges. It is modeled around Figure 2's social ecological framework. There is an emotional aspect to living with a pressure injury as these quotes from the research illustrate.

**“It has come increasingly apparent to me in the work that I do and in speaking with individuals with lived experience that we can no longer consider a siloed approach in how pressure injuries are navigated within each of the ecosystems that an individual lives or receives care,”**  
– Dr. Sharon Gabison.

In contrast to the challenges previously presented, Dr. Gabison was able to share a more optimistic vision of the intrapersonal facilitators related to pressure injury prevention and management that led to a series of recommendations from the voices of those with lived experience:

1. Provide pressure injury education to individuals and their essential care partners throughout their journey.
2. Encourage clients and their essential care partners to engage in regular pressure injury preventative practices.
3. Facilitate where possible, proper supports for clients and their essential care partners as it relates to pressure injury prevention and management.
4. Ensure proper training of staff as it relates to pressure injury prevention and management including knowledge of resources and referrals.
5. Ensure an organizational culture that is client centred and prioritizes pressure injury prevention and management.
6. Ensure a wound care team that provides a holistic approach for the prevention and management of pressure injuries.
7. Ensure appropriate clinical expertise as it relates to pressure injury prevention and management.
8. Ensure easy access to equipment and services.
9. Promote pressure injury advocates and wound care champions.
10. Implement accreditation standards for pressure injury prevention and management.

Dr. Gabison's conclusion emphasized that the only way we can truly address this nation under pressure is to go together.

**“During that three or four years of having a pressure sore, there was a period of three or four months during that time where I had looked at everything, and I was perfectly comfortable with the idea of mortality. I was ready ... I'd had enough. I was tired, physically, mentally, emotionally exhausted. I was just comfortable with the idea that if it was my time to go, it was my time to go,”**  
– care recipient.

# Research on Nursing Workload and Pressure Injuries

Kevin Woo, PhD, RN, NSWOC, WOCC(C)

James Hanratty, PEng, MBA, MEng

Dr. Kevin Woo and James Hanratty described the complex continuing care (CCC) environment as needing special consideration. Dr. Woo notes that it is more complex, with more significant obesity, multiple comorbidities, and increased frailty compared to 10 years ago. CCC patients may have indefinite stay lengths. They depend on their nurses and personal support workers for support with activities of daily living. This scenario can make patients vulnerable to pressure injury and put staff at risk for physical exhaustion.

Based on administrative data, the last prevalence study in Ontario showed a 31% prevalence in CCC.<sup>5</sup> Combined data indicated that the care interventions of individuals with a Stage 4 pressure injury in a long-term care setting ranged from 36% to 79%.

**“I’m taken aback by the fact that not every single patient with evidence of pressure injury received 100% of all care strategies that have been evidence based ... that may prevent and promote better pressure injury healing,”**  
–Dr. Kevin Woo.

Dr. Woo highlighted that this underserved and undervalued environment, with shifting population complexity, makes it more challenging for the nursing workforce.

Historically, we have not had quantitative approaches to measuring the workload of health care. We can only manage and change workload if we measure it. A discrete event simulation tool could support nurse workload and patient care quality decision making. Mr. Hanratty described the development of a discrete event simulation tool that can support nurse workload and patient care quality decision making for a CCC unit.



Kevin Woo, PhD, RN,  
NSWOC, WOCC(C)



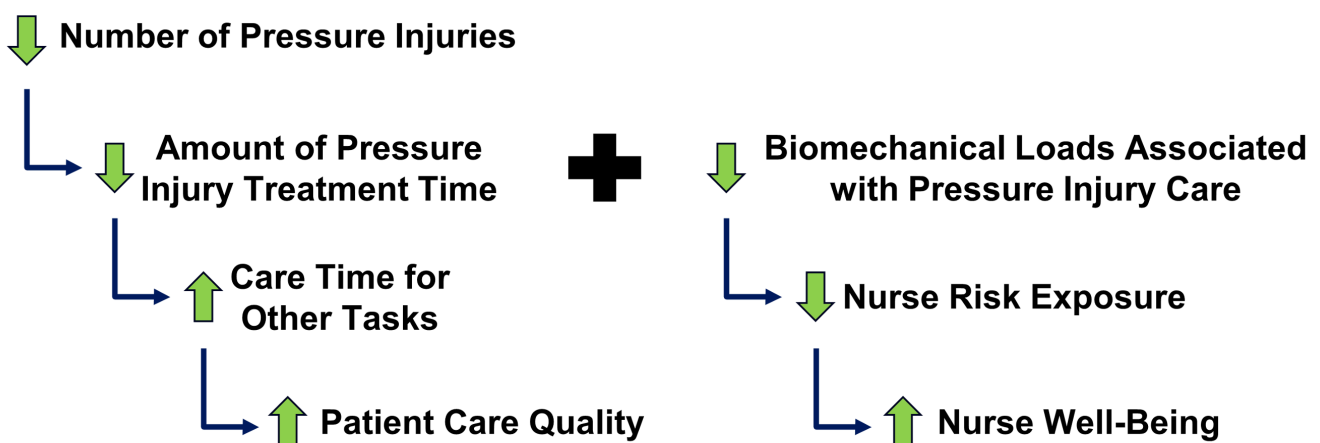
James Hanratty, PEng, MBA,  
MEng

Mr. Hanratty noted that *nursing workload* is defined as “the amount of time and care that a nurse can devote (directly and indirectly) towards patients, workplace, and professional development”<sup>21 p. 455</sup> The Better Work Better Care (BWBC) Framework, which Canadian researchers developed, provides a valuable template for improving the sustainable health care system process.<sup>22</sup>

Computer simulation allows us to have quantitative measurements of workload. The predictive tools can guide our future decision making regarding nurse workload and care quality. The direct or indirect impact on the workload of policy and administrative decisions can be modeled. If we can reduce that risk exposure, we can increase nurses’ well-being.

Mr. Hanratty referred to Dr. Ho’s session about the significant cost consequences of treating pressure injuries. However, we can now model the benefits of preventing those pressure injuries, as shown in Figure 3. Decreasing the number of pressure injuries and the time spent on pressure injury care means allocating time to other care tasks to give a higher standard of care. “That is good for the patients,” commented Mr. Hanratty.

**Figure 3** *Quantifying the Effects of Reducing Pressure Injury Prevalence*



Note. Reproduced with permission from Mr. Hanratty.

“On the nursing side, we see things like physical injury, burnout, fatigue, and turnover which speaks to one of the themes of Dr. Chapman’s talk about nurse retention, and safer care practices. If we want to retain more nurses in our workforce, a key ingredient is making sure that workload levels are sustainable. We also see impacts on patients, such as, missed care, rushed care, and other types of lapses in care. Then there’s also consequences on health care organizations, in terms of the costs, for example, associated with hiring new nurses to replace those who have been injured or on modified duties, or costs associated with providing care to make up for lapses in care quality,”

– James Hanratty.

**“What if we prevent pressure injuries versus treating them? What if we had an eight-hour shift versus a 12-hour shift? What are the effects on workload? What are the effects on care quality?”**

**– James Hanratty.**

#### PRACTICE POINTS:

- a complex and diverse patient population: many intrinsic factors that render them at risk for pressure injury;
- most injuries acquired outside of CCC require continuity of care;
- all patients were at risk for pressure injuries, with many at high risk;
- pressure injury is prevalent and largely preventable;
- care plans were developed and implemented for all patients;
- more resources are needed: surface, education, document, leadership, staffing/workload;
- computer simulation is a new approach to studying nurse workload and workload-affected variables; and
- validated computer simulation tools can guide decision making.





# Pressure Injury Experience: A Patient Voice

Luz Odrial, RN

Luz Odrial helped summit participants recognize the impact of pressure injuries. In a devastating accident on vacation, Mrs. Odrial suffered a spinal cord injury (SCI) from a motor vehicle accident in which her mother died, and her son broke his leg. It has been a troublesome journey managing her life-changing injury, the health care system, and a preventable Stage 4 pressure injury.

In an overseas trauma centre, there was a delay of 6 days waiting for surgery, during which pressure injuries occurred on Mrs. Odrial's heels and sacrum. On stabilization of the spine, the wounds were referred to a general surgeon for debridement, as well as infectious diseases. As shown in Figure 4, it took 4 months to heal. Mrs. Odrial was repatriated back to Canada after 4 weeks.



Luz Odrial, RN

**Figure 4** Stage 4 Pressure Injury Day 7 and Day 130



*Note.* The Stage 4 pressure injury developed significant tunneling and undermining. Treatment included intravenous ciprofloxacin 400 mg every 12 hr for 14 days. Reproduced with permission of Mrs. Odrial.

In a little over a year, the mother of three shared how she was hesitant about catheterization and the risks of delayed healing and infection. The field of continence plays an important role in pressure injury prevention and management. Upon referral to Lyndhurst after 2 months, the indwelling catheter was finally removed. She is still scared to lie on her back for more than a few minutes. Her spouse has become her informally trained caregiver to check her skin integrity. Mrs. Odrial is especially cognizant of transfers to and from her wheelchair.

Mrs. Odrial has adapted her life, looking after her well-being and family.

# Addressing the Gaps in the Surgical Management of Pressure Injuries

Catherine Craven, MD, MSc, BA, FRCPC, FASIA, FCAHS



Catherine Craven, MD, MSc, BA, FRCPC, FASIA, FCAHS

Medical Director for the Spinal Cord Institute Program at UHN, Dr. Catherine Craven guided summit attendees through managing this at-risk population with spinal cord injury or disease (SCI/D). There is a lifetime prevalence of pressure injury for someone with SCI/D of 85%–95%.<sup>23</sup>

## IMPLEMENT HEAD-TO-TOE SKIN CHECKS

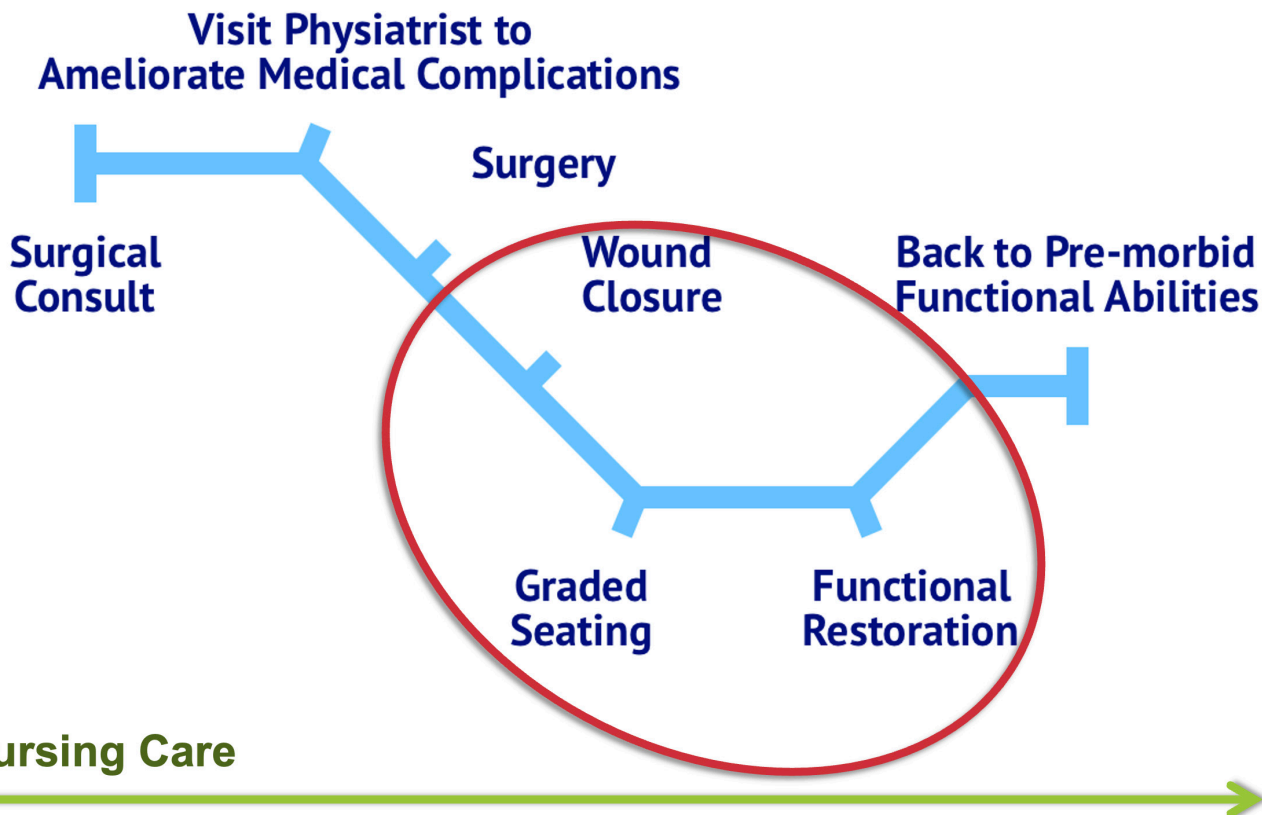
Dr. Craven highlighted the value of daily head-to-toe skin checks. These reduce the incidence and severity of pressure injuries among individuals with SCI/D. Implementing daily head-to-toe skin checks for inpatients identified that 32% were shown to have a pressure injury. The daily head-to-toe skin checks were successfully completed 85.7% of the time. Dr. Craven would like that to be 100%. Nevertheless, by 2023, the quality improvement practice had reduced the incidence of open pressure injuries at discharge by 4%. The daily skin checks, underpinned by documentation and patient education, assist with transferring responsibility from the nurse staff to the patient/ family/caregiver. Practicing these skills in a rehabilitation setting before discharge is worthwhile. A Cortree video demonstrates how this can be done effectively with a smartphone.

## FLAP RECONSTRUCTION SURGERY

Flap surgical reconstruction is an option to manage chronic Stage 3 and 4 pressure injuries. Flap reconstruction surgery is transformative for the patient, albeit it has a 30–50% complication rate. There is also a 20% risk of a new pressure injury following surgery.<sup>24</sup> In traumatic or nontraumatic SCI, the hospital's costs for a patient undergoing surgical closure of a Stage 4 pelvic pressure injury is CAN\$12,960 with a standard deviation of CAN\$6,493.<sup>25</sup>

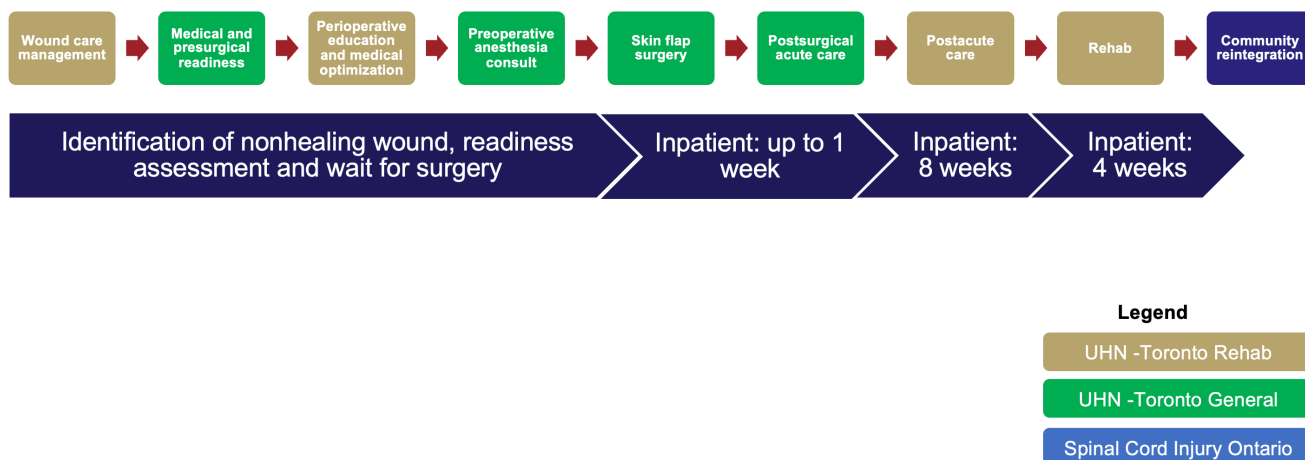
*Dr. Craven described the typical skin care patient journey (illustrated in Figure 5), noting that we do well in surgical and physiatrist consultations, as well as surgery. At the same time, there remain opportunities for improvement, especially in wound closure, graded seating, and functional restoration. In an ideal model, we wish to see a speedier discharge from acute care / tertiary spine centre to tertiary rehab centre, avoiding any transfer into the community. This limits the opportunities for pressure injuries to develop.*

**Figure 5** Skin Flap Patient Journey



Note. Reproduced with permission of Dr. Craven.

**Figure 6** Craven's Optimal Care Pathway



Note. Reproduced with permission of Dr. Craven

Dr. Craven went on to describe her perceived optimal care pathway in Figure 6, which has allowed for a reduction in complication rates from 50% to 20%.

Dr. Craven acknowledges that sustained practice change is hard. She points out that CPIAP and partners can advocate for risk-stratified care where the most talented nursing team sees patients with the most complex wounds.

**“Those with CRP over 100 and cachexia not responding are the people who we need to activate the resources and acute care. No more community management. This is an emergency,” – Dr. Catherine Craven.**

Finally, among Dr. Craven’s proclaimed crazy ideas for the summit is for everyone to consider why a patient cannot be issued a pressure redistribution surface in the emergency room, which follows them for their whole health care journey. “Why doesn’t the patient and their surfaces go together? Every time there’s a change or transition from unit to unit, we have the opportunity to get it wrong,” she notes. It could be more seamless.

**“I would like you to think about a world with daily head-to-toe skin checks in acute care, giving patients one surface and it went with them through the whole journey of care, or thinking about selling a health authority or the Ministry of Health a pathway of care, not an episode of care for patients who need surgical intervention,” – Dr. Catherine Craven.**

**“I direct Craven’s optimal paradigm for which is shared care between the community rehab, CCC, and acute care that I really think is important for us to think about. These are the patients that challenge us to do systems thinking, not per episode, and systems thinking is a bit of a different process, but really requires all of us also to work together,” – Dr. Catherine Craven.**

Dr. Craven’s rules on when to escalate secondary complications and call it an emergency.

- C-reactive protein (CRP) is a protein present in blood serum in various abnormal states, such as inflammation or neoplasia.<sup>26</sup> A CRP greater than 100 is an independent risk factor of mortality.<sup>27</sup>
- Cachexia is a general physical wasting and malnutrition usually associated with chronic disease.<sup>28</sup> In those SCIs, it signifies weight loss and increased mortality. A significant cause is cytokine excess. As the patient reaches the refractory stage of cachexia, their life expectancy is <3 months. Weigh people every time we see them.

# Group Discussion on Strategic Priorities

The summit cochairs, Kaylem Boileau, MHSc, BASc, HBSc, RD, IIWCC, CPIAP President and Joshua Moralejo, MScCH:WPC, BScN, RN, IIWCC, NSWOC, WOCC(C), CPIAP President-Elect engaged the attendees in a crucial conversation about pressure injury prevention and management, posing questions to both in-person attendees and those watching online, in order to identify strategic priorities using the Mentimeter application.

## Which practice guidelines do your policies and procedures stem from? 98 responses

54 – RNAO Assessment and management of Pressure Injuries for the Interprofessional Team

54 – Wounds Canada Best Practice Recommendations for the Prevention and Management of Pressure Injuries

52 – EPUAP/NPIAP/PPPIA 2019 International Guidelines

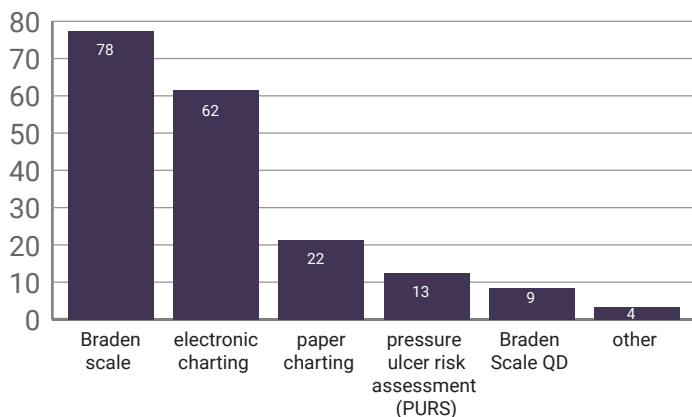
25 – Canadian Best Practice Guidelines for the Prevention and Management of Pressure Ulcers in People with Spinal Cord Injury

11 – other

1 – we do not have policy and procedures for the prevention and management of pressure injuries

9 – currently working on this

## How are pressure injury risk assessed and documented in your setting? 89 responses



## How are pressure injuries documented (captured) in your setting? 79 responses

65 – electronic charting

58 – admission or initial assessments

50 – progress notes

47 – wound photography

44 – flow sheets

34 – consults

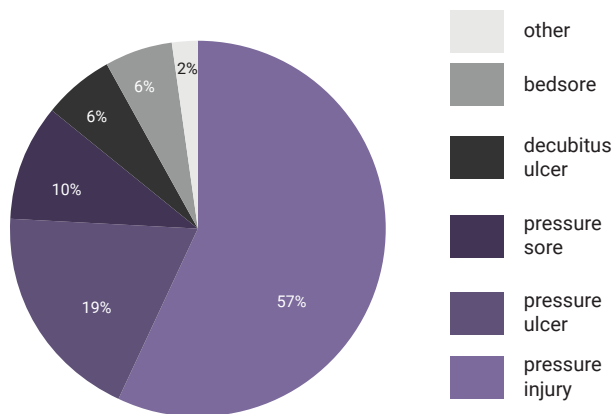
32 – discipline specific / focused clinical assessments

29 – wound documentation application

21 – paper charting

5 – validated tools (e.g., BWAT, PUSH, PWAT)

## What terminology is currently being used when documenting pressure injuries in your organization? 74 responses



## Does your organization offer education on pressure injury prevention, assessment or treatment? 92 responses

37% – yes, during onboarding or corporate orientation

28% – yes, ongoing in-person education

18% – yes, just in time or as needed education

17% – yes, recurring online modules

0% – no organization provided education

# Call to Action in Relieving the Nation Under Pressure

Based on the recommendations from our esteemed speakers and the crucial conversations with clinical leaders, administrators, government officials, patients, and industry representatives present at the summit, several calls to action were identified.

## FEDERAL:

- make avoidable pressure injury management a priority in our system to address this silent pandemic;
- a national strategy in support of standardized guidelines and interventions for pressure injury prevention and management;
- a national pressure injury framework that avoids duplication of effort;
- national data strategy that supports the collection, review, analysis, and utilization of pressure injury data;

## PROVINCIAL/TERRITORIAL:

- skin and wound committees to support standardized practices across the region, from urban to rural settings; and
- mandatory reporting of Stage 3 and 4 pressure injuries to provincial health ministries;

## HEALTH CARE ORGANIZATIONS:

- have policies and procedures in place to support the interprofessional prevention and management of pressure injuries that reflect current best practice guidelines;
- have practices in place where pressure injury prevention starts the moment a client enters your care;
- ensure incident reports are being completed for Stage 2–4 and unstageable pressure injuries;

- ensure training of nurses, including Nurses Specialized in Wound, Ostomy, and Continence (NSWOC), Skin Wellness Associate Nurses (SWAN) in long-term care, physicians, physiotherapy, occupational therapy, personal support workers (PSWs) and allied health care professionals creating interprofessional teams on pressure injury prevention and management, including knowledge of resources and referrals;
- support an organizational culture that is client centred on skin risk assessment and prioritizes pressure injury prevention; and
- ensure easy access to equipment, such as pressure redistribution mattresses, and services, such as access to a specialized nurse.

## CLINICIANS:

- keep informed on current evidence on pressure injury prevention and management;
- advocate for clients during your care, and during transitions of care;
- create pressure injury prevention care plans for your patients;
- daily head-to-toe skin checks on all patients; and
- engage your interprofessional colleagues and refer to external clinicians when needed; and

## RESEARCHERS:

- areas of future research include Canada-wide pressure injury prevalence study.

Our esteemed speakers highlighted key gaps in our system and identified strategic priorities, including the need for a nationwide framework and policy; the need for standardization of practices and documentation; a better approach to collecting, reviewing, analysing, and using pressure injury data; access to trained specialized nurses and the need for seamless transition in care where pressure injury prevention and management is well supported.

On behalf of CPIAP Summit Cochair Kaylem Boileau closed the event by encouraging everyone to leave “motivated to make changes in their sector, from small patient-level changes to large policy changes.” She noted that pressure injury prevention will not change overnight and that “we need to get a nation united in pressure injury prevention management and policy in order to make the biggest impact.”



# Glossary

**Cachexia** is a general physical wasting and malnutrition usually associated with chronic disease.<sup>27</sup>

**C-reactive protein** is a protein present in blood serum in various abnormal states, such as inflammation or neoplasia.<sup>26</sup>

**Deep tissue pressure injury** is a “persistent non-blanchable deep red, maroon or purple discoloration.”<sup>29</sup>

**Pressure injury** is localized damage to the skin and/or underlying tissue, as a result of pressure or pressure in combination with shear. Pressure injuries usually occur over a bony prominence but may also be related to a medical device or other object.<sup>15</sup>

**Stage 1 pressure injury** is a “non-blanchable erythema of intact skin.”<sup>29</sup> Edema may also be present.

**Stage 2 pressure injury** is a “partial-thickness skin loss with exposed dermis.”<sup>29</sup>

**Stage 3 pressure injury** is a “full-thickness skin loss.”<sup>29</sup>

**Stage 4 pressure injury** is a “full-thickness loss of skin and tissue.”<sup>29</sup>

**Unstageable pressure injury** is a “obscured full-thickness skin and tissue loss.”<sup>29</sup>

# Abbreviations

|        |   |
|--------|---|
| CCC    | complex continuing care                                   |
| CMS    | Center for Medicare and Medicaid [US]                     |
| CPIAP  | Canadian Pressure Injury Advisory Panel                   |
| CRP    | C-reactive protein  |
| EPUAP  | European Pressure Ulcer Advisory Panel                    |
| HEC    | Healthcare Excellence Canada                              |
| NPIAP  | National Pressure Injury Advisory Panel [US]              |
| NSWOC  | Nurse Specialized in Wound, Ostomy, and Continence        |
| NSWOCC | Nurses Specialized in Wound, Ostomy and Continence Canada |
| RNAO   | Registered Nurses' Association of Ontario                 |
| SCI    | spinal cord injury  |
| SCI/D  | spinal cord injury/disease                                |
| SWAN   | Skin and Wellness Associate Nurse                         |
| UHN    | University Health Network                                 |

# Recommended Resources

Can-SCIP Guidelines Skin Integrity <https://kite-uhn.com/can-scip/en/recommendations/prevention-pressure-injury-prevention-and-the-interprofessional-team>

Daily Skin Checks | Pressure Injury Prevention in Spinal Cord Injury Rehab | SCIO Peer Connections (Cortree TV) <https://youtu.be/jyFhNv2Jqd8?si=jNNp9BfC1mEhPON6>

Project ECHO Ontario Skin and Wound <https://wound.echoontario.ca>

SCI Implementation, Evaluation, and Quality Care Consortium (SCIIEQCC) [<https://www.sciconsortium.ca>] comprises 13 centres in Canada

Spinal Cord Essentials – UHN portal <https://www.uhn.ca/TorontoRehab/Spinal-Cord-Rehab/Spinal-Cord-Essentials>



# Appendix – Summit Agenda

**08:30 Welcome and Territorial Land Acknowledgement**

Kaylem Boileau, MHSc, BAsC, HBSc, RD, IIWCC

Joshua Moralejo, MScCH:WPC, BScN, RN, IIWCC, NSWOC, WOCC(C)

**08:45 Opening Remarks** Pam Hubley, MSc, BScN, RN

**09:00 Nursing Change to Support a Nation Under Pressure**

Leigh Chapman, PhD, RN

**09:45 The Canadian Pressure Injury Landscape: Strategies to Address Health Care System Issues**

Chester Ho, MD

**10:30 Health Break With Industry Exhibitors**

**11:00 In Their Own Voices: Addressing the Challenges Related to Pressure Injury Care**

Sharon Gabison, PhD, MSc, BScPT, BSc, IIWCC

**11:30 Research on Nursing Workload and Pressure Injuries**

Kevin Woo, PhD, RN, NSWOC, WOCC(C)

James Hanratty, PEng, MBA, BEng

**12:15 Lunch with Industry Exhibitors**

**13:00 Pressure Injury Experience: A Patient Voice**

Luz Odrial, RN

**13:30 Addressing the Gaps in the Surgical Management of Pressure Injuries**

Catherine Craven, MD, MSc, BA, FRCPC, FASIA, FCAHS

**14:15 Group discussion on Strategic Priorities to Improve Pressure Injury Prevention and Care Across Canada**

**15:30 Next Steps in Relieving the “Nation Under Pressure”**

Kaylem Boileau, MHSc, BAsC, HBSc, RD, IIWCC

Joshua Moralejo, MScCH:WPC, BScN, RN, IIWCC, NSWOC, WOCC(C)

# Industry In Action



Perfuse Medtech



Smith+Nephew



Urgo Medical North America



XSENSOR



Mölnlycke Health Care



Coloplast



Medline



Baxter



BioMiq

# References

1. Ackroyd-Stolarz S. *Improving the prevention of pressure ulcers as a way to reduce health care expenditures*. CMAJ. 2014 Jul 8;186(10):E370-1. <https://doi.org/10.1503/cmaj.131620>
2. Registered Nurses' Association of Ontario (RNAO). *Pressure injury management: Risk assessment, prevention and treatment*. 4th ed. Toronto (ON): RNAO; 2024.
3. Health Canada. *Nursing retention toolkit: improving the working lives of nurses in Canada* [Internet]. Ottawa: Government of Canada; 2024, Mar [cited 2024 Nov 30]. 75 p. <https://canada.ca/nursingtoolkit>
4. Woodbury MG, Houghton PE. *Prevalence of pressure ulcers in Canadian healthcare settings*. *Ostomy Wound Manage*. 2004 Oct;50(10):22-38.
5. Woo KY, Sears K, Almost J, Wilson R, Whitehead M, VanDenKerkhof EG. *Exploration of pressure ulcer and related skin problems across the spectrum of health care settings in Ontario using administrative data*. *Int Wound J*. 2017 Feb;14(1):24-30. <https://doi.org/10.1111/iwj.12535>
6. Padula WV, Delarmente B. *The national cost of hospital-acquired pressure injuries in the United States*. *Int Wound J*. 2019;16:634-40. <https://doi.org/10.1111/iwj.13071>
7. Brem H, Maggi J, Nierman D, et al. *High cost of stage IV pressure ulcers*. *Am J Surg*. 2010 Oct;200(4):473-7. <https://doi.org/10.1016/j.amjsurg.2009.12.021>
8. Chan B, Ieraci L, Mitsakakis N, et al. *Net costs of hospital-acquired and pre-admission PUs among older people hospitalised in Ontario*. *J Wound Care*. 2013 Jul;22(7):341-6. <https://doi.org/10.12968/jowc.2013.22.7.341>
9. Li Z, Lin F, Thalib L, Chaboyer W. *Global prevalence and incidence of pressure injuries in hospitalised adult patients: A systematic review and meta-analysis*. *Int J Nurs Stud*. 2020;105:103546. <https://doi.org/10.1016/j.ijnurstu.2020.103546>
10. Norton L, Parslow N, Johnson D, et al. *Best practice recommendations for the prevention and management of pressure injuries* [Internet]. North York (ON): Wounds Canada; 2021 Feb 11 [cited 2024 Nov 30]. 62 p. Available from: <https://www.woundscanada.ca/health-care-professional/publications/dfc-2>
11. Patsakos EM, Bayley MT, Kua A, et al. *Development of the Canadian spinal cord injury best practice (Can-SCIP) guideline: methods and overview*. *J Spinal Cord Med*. 2021;44(sup1):S52-S68. <https://doi.org/10.1080/10790268.2021.1953312>
12. Houghton PE, Campbell K. *Canadian best practice guidelines for the prevention and management of pressure ulcers in people with Spinal Cord Injury: a resource handbook for clinicians*. Ontario Neurotrauma Foundation; 2013. [download no longer available]
13. Health Standards Organization. *HSO 5063:2024 (E):Optimizing skin integrity: a required organizational practice* [Internet]. Ottawa: Health Standards Organization; 2024 May [cited 2024 Nov 30]. 8 p. Available from: <https://store.healthstandards.org/products/optimizing-skin-integrity-hso-5063-2024-e>
14. Healthcare Excellence Canada: *Everyone in Canada wants and deserves safe, high-quality healthcare* [Internet]. Ottawa: Healthcare Excellence Canada; c2024. *Pressure ulcer: clinical and system reviews, incident analyses*. [cited 2024 Nov 30]; [about 2 screens]. Available from: <https://www.healthcareexcellence.ca/en/what-we-do/all-programs/hospital-harm-is-everyones-concern/hospital-harm-improvement-resource/pressure-ulcer-introduction/pressure-ulcer-clinical-and-system-reviews-incident-analyses/>
15. European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. *Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. The International Guideline*. Emily Haesler (Ed.). EPUAP/NPIAP/PPPIA: 2019.
16. Gabison S, Unger J, Fernie G, Dutta T, Cameron JI. *Are we doing enough? Information needs and preferences in individuals living with a pressure injury*. *Innovations in Care*. 9th Spinal Cord Injury Conference, Virtual. In progress.
17. Gabison S, Tsang I, Dutta T, Cameron J. *Knowledge and information needs of unpaid caregivers of individuals with a current or past pressure injury: a qualitative study*. In progress.
18. Cesca N, Szczepanski A, Malik W, et al. *Facilitators and barriers to pressure injury prevention, management and education: Perspectives from healthcare professionals—A qualitative study*. *Int Wound J*. 2024 Jan;21(1):e14371. <https://doi.org/10.1111/iwj.14371>
19. Bronfenbrenner U. *The ecology of human development*. Cambridge, MA: Harvard University Press. 1979.
20. Golden SD, Earp JA. *Social ecological approaches to individuals and their contexts: twenty years of health education & behavior health promotion interventions*. *Health Educ Behav*. 2012 Jun;39(3):364-72. <https://doi.org/10.1177/1090198111418634>
21. Alghamdi MG. *Nursing workload: a concept analysis*. *J Nurs Manag*. 2016 May;24(4):449-57. <https://doi.org/10.1111/jonm.12354>
22. Neumann WP, Purdy N. *The better work, better care framework: 7 strategies for sustainable healthcare system process improvement*. *Health Systems*. 2023;12(4):429-45. <https://doi.org/10.1080/20476965.2023.2198580>
23. Craven BC, Bateman EA, Flett H, et al. *The changing prevalence of pressure injury among Ontarians with SCI/D at rehabilitation admission: opportunities for improvement*. *Healthcare* 2024 Jun 1;12(11):1084. <https://doi.org/10.3390/healthcare12111084>
24. Larson DL, Hudak KA, Waring WP, et al. *Protocol management of late-stage pressure ulcers: a 5-year retrospective study of 101 consecutive patients with 179 ulcers*. *Plast Reconstr Surg*. 2012;129:897-904. <https://doi.org/10.1097/PRS.0b013e3182442197>
25. Teague L. *Surgical closure of pelvic pressure injuries in spinal cord injured adults: case identification, costs, health care utilization and risk factors for surgical complications* [dissertation]. Hamilton (ON): McMaster University; 2020, June. 246 p. <https://macsphere.mcmaster.ca/handle/11375/25638>
26. Merriam-Webster dictionary [Internet]. Springfield (MA): Merriam-Webster; c2024. *C-reactive protein*. [cited 2024 Nov 30]; [about 3 screens]. Available from: <https://www.merriam-webster.com/dictionary/C-reactive%20protein>
27. Maluf CB, Barreto SM, Giatti L, et al. *Association between C reactive protein and all-cause mortality in the ELSA-Brasil cohort*. *J Epidemiol Community Health*. 2020 May 1;74(5):421-7. <https://doi.org/10.1136/jech-2019-213289>
28. Merriam-Webster dictionary [Internet]. Springfield (MA): Merriam-Webster; c2024. *Cachexia*. [cited 2024 Nov 30]; [about 2 screens]. Available from: <https://www.merriam-webster.com/dictionary/cachexia>
29. National Pressure Injury Advisory Panel [Internet]. Schaumburg (IL): National Pressure Injury Advisory Panel. *Pressure injury stages*. [cited 2024 Nov 30]; [about 2 screens]. Available from: <https://npiap.com/page/PressureInjuryStages>

# CPIAP

## Canadian Pressure Injury Advisory Panel

CPIAP is an interprofessional collaboration dedicated to improving lives of persons affected by pressure injuries across the continuum of care through research, knowledge translation, policy, and advocacy.

### **Canadian Pressure Injury Advisory Panel**

#### **In partnership with**

University Health Network is a health care and medical research organization in Toronto, Ontario. The scope of research and complexity of cases at UHN has made it a national and international source for discovery, education and patient care.



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