

Physiotherapy: Leading Action
Toward Better Pain Management
and Rehabilitation







BTL Elite Shockwave

The most powerful shockwave device in Canada

OrthoCanada and BTL are leading the way in innovation and development. Offering the most powerful radial shockwave device on the market with an intensity of up to 6 bars and ultralight Intelligent Magnum applicator, the new BTL-6000 Elite Shockwave unit is a clinical solution that addresses all sub-acute and chronic musculotendinous conditions, BTL devices are exclusive to OrthoCanada.

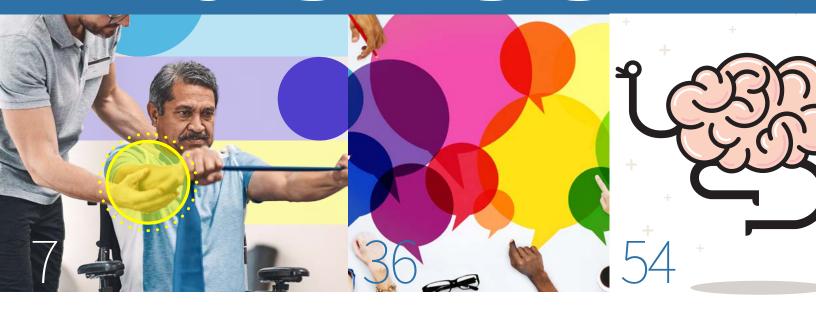


1-800-561-0310





Association canadienne de physiothérapie



- **5** Get to know your 2023 Board of Directors!
- 6 President's Message
- 7 Response to the Recommendations of the Canadian Pain Task Force
- 26 Physiotherapy & Pain Management

- 29 Advocacy for Pain Management
- 32 Role of the Physiotherapist in pain assessment, management, and rehabilitation for older adults
- **36** Conversations in Pain

- 46 A Multidisciplinary Approach to Telehealth Education Amidst a Global Pandemic
- 50 Using Kinesiology Tape in Physiotherapy Practice for Pain Management
- **54** Mindfulness for Reversing and Preventing Burnout

Spring 2023

Pain Management and Rehabilitation





Managing Editor

Brittany Adams

Art Direction

Shift 180

Contributors

- Amanda de Chastelain
- CPA's Division Working Group on Pain Advocacy
- Neil Pearson
- Grace Liu
- Helen Johnson
- Keith Meldrum
- Virginia McIntyre
- Susan Tupper
- Nathan Augeard

- Giulia Mesaroli
- · Sara Abdo,
- Emily Balkam
- Jonathan Harris
- Carmel O'Keefe
- Daphne Pereira
- Lynn Shaw
- Tiffany Tiu
- Bonnie Klassen

Advertising Sales

advertising@physiotherapy.ca

Publication of advertisements does not represent an endorsement by the CPA.

Canadian Physiotherapy Association editor@physiotherapy.ca

Material in Physiotherapy Practice is protected by copyright and may not be reprinted without the permission of the publisher, Canadian Physiotherapy Association.

Publication Mail

Agreement No. 40065308

Return undeliverable Canadian addressed mail to:

Canadian Physiotherapy Association 955 Green Valley Crescent, Suite 270 Ottawa, ON K2Ć 3V4

Follow us:



facebook.com/CPA.ACP



twitter.com/physiocan



linkedin.com/company/canadian-physiotherapy-association



@physiotherapycanada

© Canadian Physiotherapy Association, 2023. All rights reserved. No part of this material may be reproduced, stored in a retrieval system, or transcribed in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without written permission from the Canadian Physiotherapy Association. Requests should be made to the Managing Editor at badams@physiotherapy.ca.

The opinions expressed in *Physiotherapy Practice* are those of the authors and contributors, and do not necessarily reflect those of the CPA, the editors, the editorial board, or the organization to which the authors are affiliated.

CPA's Board of Directors 2023

Get to know your 2023 Board of Directors!

We are pleased to welcome two new board members this year, Maria Milioto and Jason Nenzel.



Maria Milioto *Quebec*

Maria was elected to the Board in 2022 and currently serves as the Chair of the Governance Committee. She has been a physical therapist

since her graduation from McGill University in 1995. She has spent her career working in management, and is passionate about leadership and rehabilitation.

In 2018, she joined Physiothérapie Universelle and Lifemark as Vice-President, Operations for Quebec. In October 2022, she moved into a national role as Vice-President, Interdisciplinary Rehabilitation Services.

Maria is involved with cancer and rehabilitation through the Coalition Priorité Cancer organization, where she helps patients understand how physical therapy can play a major role in their rehabilitation. She has also worked with Association Physiothérapie Montreal, where she participated in a panel on the Future of Physiotherapy.

Maria is passionate about board management, leadership, and change management and looks forward to helping the Board achieve its strategic vision.



Jason Nenzel
British Columbia

Jason was elected to the Board in 2022. Jason is a registered physical therapist specializing in orthopaedics, including pain management,

performance optimization, intramuscular stimulation, manual therapy, and corrective exercise.

Jason received his Master of Science degree in Physical Therapy from the University of Alberta, where he held the position of President for both the Rehabilitation Medicine Student Association and the Physical Therapy Graduate Committee. Jason also has an undergraduate degree in Sport, Health, and Physical Education from Vancouver Island University, where he graduated as valedictorian.

Jason has pursued continuing education in several areas related to orthopaedics, including advanced training in intramuscular stimulation, spinal manipulation techniques, and glenohumeral joint management.

Jason currently sits on the Board's Governance Committee.

Current Board Members

Amanda de Chastelain – President Jason Coolen George Roumeliotis Kate Grosweiner Allison Stene Jean-Paul Hernandez John Nagy

For more information on all of our board members, please visit our website.

Spring 2023



President's Message

May is National Physiotherapy Month, an opportunity to celebrate and recognize the incredible work that physiotherapy professionals, registered physiotherapists, physiotherapy assistants, physiotherapy technologists, and physiotherapy students do year-round to improve the health and well-being of Canadians.



The theme for this year's National Physiotherapy Month is *Leading Action Toward Better Pain Management and Rehabilitation*, and throughout the month of May the Canadian Physiotherapy Association (CPA) will be highlighting the critical role that physiotherapy professionals play in the non-pharmacological pain management and rehabilitative care of Canadians, as well as the actions they are taking to advocate for increased supports for those living with chronic pain.

And so, in honour of National Physiotherapy Month, this issue of Physiotherapy Practice is entirely dedicated to the subject of pain management and rehabilitation. It contains articles and resources developed by colleagues from across the profession who are taking the lead on transforming how pain is understood and treated, and provides a detailed look at some of the innovative work being done in this area across the country.

The idea for this year's National Physiotherapy Month theme came about in November 2021, when the CPA's Pain Science Division came forward with the idea of working cross-Divisionally to respond to the Canadian Pain Task Force's Action Plan for Pain in Canada, which outlines specific and targeted actions necessary to improve outcomes for people living with chronic pain and reduce its impact on families, communities, and society. Colleagues from across the CPA's Divisions unanimously agreed, and came together to form a working group to identify the ways that physiotherapists — in collaboration with physicians and other health providers — can lead non-pharmacological pain management in Canada.

This month, only a year and a half after the idea was first proposed, the CPA's Working Group on Pain Advocacy proudly released its <u>Position Paper from the Physiotherapy Profession: A Key Player in Realizing the Action Plan for Pain in Canada</u>, which highlights the ways physiotherapy professionals can support the achievement of each of the six goals defined in the Action Plan for Pain in Canada.

As you can see, this year's National Physiotherapy Month has already inspired a lot of groundbreaking collaborative work across the profession, and here at the CPA we hope to continue building on this spirit of collaboration with our Divisions, Branches, Assemblies, and members throughout the year as we work to strengthen our relationships with key partners, enhance our advocacy capabilities, and modernize our business operations in support of our ambitious new 2023–2025 Strategic Plan.

And so, as we kick off National Physiotherapy Month with the release of this issue of Physiotherapy Practice, I want to personally thank each and every one of you for your dedication to the CPA, to your profession, and to those you serve. I look forward to continuing to work with you to advance the profession and support the evolving health needs of Canadians.

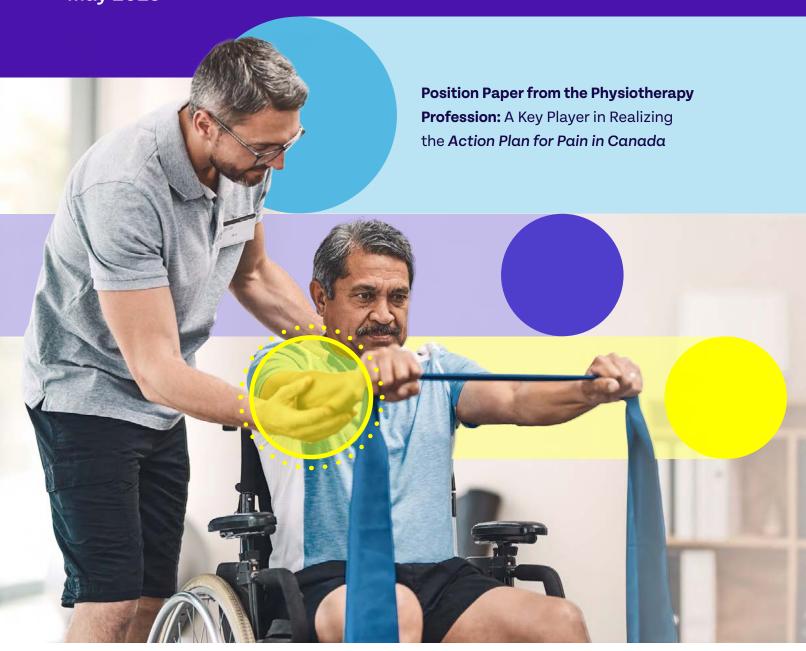
Sincerely,

Amanda de Chastelain

President, Canadian Physiotherapy Association

Response to the Recommendations of the Canadian Pain Task Force

May 2023



Purpose of this Document

In its May 2021 report, An Action Plan for Pain in Canada, the Canadian Pain Task Force (CPTF) presented the blueprint for establishing an improved approach to the prevention and management of pain in Canada.

These recommendations were clustered around six goals related to transforming how pain is understood and treated, namely:

- 1. Enable coordination, collaboration, and leadership on pain care across Canada
- Improve access to timely, equitable, and person-centred pain care
- Increase awareness, education, and specialized training for pain
- 4. Support pain research and strengthrelated infrastructure
- Monitor population health and health system quality
- Ensure equitable approaches for populations disproportionately impacted by pain

This document is the Canadian physiotherapy profession's response to that *Action Plan* — and, more specifically, a declaration of physiotherapy's commitment to be a leader, key informant, and collaborator, where and how we can, working alongside physicians and other health professionals, including pharmacists, nurses, psychologists, and occupational therapists.

As the go-to healthcare professionals for so many patients suffering from pain and pain-related disability, physiotherapists are ideally positioned to guide action toward evidence-based, non-pharmacological pain management, prevention, and rehabilitation — not just by providing care but as educators and researchers as well.

Together, we can make the CPTF Action Plan a reality for health and well-being in Canada.

Physiotherapists are ideally positioned to lead action toward better non-pharmacological pain management — as evidence-based care providers, educators, and researchers.

About the Canadian Physiotherapy Association (CPA)

The Canadian Physiotherapy Association (CPA) represents more than 17,000 physiotherapy professionals across Canada, including registered physiotherapists, physiotherapist assistants, physiotherapy technologists, and students. Physiotherapy professionals provide essential rehabilitative care and treatment, enabling Canadians to live well and actively participate in all facets of their lives.

CPA's Division Working Group on Pain Advocacy

- Arthur Woznowski-Vu, PT, MScA, PhD candidate, McGill University; Chair, CPA Pain Science Division; Lead, CPA Division Working Group on Pain Advocacy
- Nathan Augeard, Pain Science Division Executive, PT, PhD Candidate McGill University
- Gabrielle Sadler, LSSBB, MScPT, Chair, CPA Seniors Health Division; Project Manager, Rehabilitative Care Alliance
- Lesley Singer Norris, MSc Rehabilitation Science,
 Adjunct Professor, School of Physical and
 Occupational Therapy, McGill University
- Alex Grant, Chair, CPA Oncology Division
- Melissa Cursons, Chair, CPA Paediatric Division
- Devonna Truong, Chair, CPA Division Chairs
 Committee; Past Chair, CPA Women's Health Division
- Janet Holly, Senior Physiotherapist, Ottawa
 Hospital; Past Chair, CPA Pain Science Division
- Karim Meghji, Chair, CPA Private Practice Division
- Patrick Ippersiel, Physiotherapist, AXIO;
 Research Doctorate, McGill University;
 CPA Pain Science Division Executive
- Paula Ospina-Lopez, CPA National Student Representative, Oncology Division



- Rachel Stokes, Past President, CPA
 National Student Assembly
- Roxanne Azoory, Chair, CPA National
 Orthopaedic Division; Fellow of the Canadian
 Academy of Manipulative Therapists
- Michael Sangster, Canadian Pain Task Force
 Member; Clinical Specialist in Pain Science; Founder,
 Project Next Miles; Adjunct Faculty Member,
 Dalhousie University School of Physiotherapy
- Vanitha Arumugam, Knowledge Translation Representative, CPA Global Health Division
- Grace Liu Chan, Education Coordinator, Seniors Health Division
- Neil Pearson, Past Chair, CPA Pain Science Division
- Gloria Gilbert, Member, CPA Pain Science Division

Acknowledgements

The CPA and Working Group extend their thanks to Dale Morris, Pirouette Consulting, for contributing to the development of this paper.



Painful Realities

The Canadian Pain Task Force **Action Plan**, and the Task Force's prior reports, highlighted why it is necessary to change how pain is managed in Canada. The prevalence of chronic pain, the incidence among older adults – a growing segment of our population – and the urgency of the opioid epidemic are all amplifying the need for health professionals to come together. Physiotherapists are key players in making the CPTF **Action Plan for Pain in Canada** a reality.

It is estimated that 7.6 million Canadians (one in every five) currently suffer from chronic pain, and projections suggest that number could grow to nine million by 2030.1

Older adults with frailty are just one of the marginalized populations affected by chronic pain. As the CPTF *Action Plan* acknowledges, many other groups also suffer disproportionately, including Indigenous peoples, people living in poverty, persons with disabilities, veterans, and individuals with mental health and substance use disorders.²

Many people use substances to cope with otherwise untreated chronic pain. This is particularly true of opioids,

related to which Canada has seen a shocking increase in harms and deaths in recent years, exacerbated by the COVID-19 pandemic. After two decades of heavy prescribing increased individuals' dependence on opioids, efforts have been made to reverse the trend. That has driven patients to seek illicit synthetic opioids such as fentanyl to self-medicate, putting them at serious risk of overdose. Many of these people living with chronic pain lack access to non-pharmacological treatment options.³

The costs to the provinces and territories associated with chronic pain are significant. Beyond the healthcare costs of treatment, there are economic tolls from disability as well – in terms of lost productivity. According to the 2017 Canadian Survey on Disability, 4,062,000 people (14.5% of Canadians aged 15 years and over with a disability) were identified as having a pain-related disability that limited them in their daily activities. Disabilities related to pain, mobility, and flexibility were the most common types of disability. In total, the economic burden attributable to chronic pain has been estimated to be as high as \$60 billion CAD per year. To put this in perspective, previous research estimates that health care costs in Canada directly related

¹Health Canada. (2021). (rep.) An Action Plan for Pain in Canada.

² Health Canada. (2021). (rep.) An Action Plan for Pain in Canada.

³ Health Canada's Statement on Opioids and Pain Management. (2022). https://www.canada.ca/en/health-canada/news/2022/11/health-canadas-statement-on-opioids-and-pain-management.html.

⁴Statistics Canada. (2018, November 28). A demographic, employment and income profile of Canadians with disabilities aged 15 years and over, 2017. Canadian Survey on Disability Reports, 2017. Statistics Canada Catalogue no. 89-654-X. https://www150.statcan.gc.ca/n1/pub/89-654-x/89-

⁵ Health Canada. (October 2020). Canadian Pain Task Force Report. Working Together to Better Understand, Prevent, and Manage Chronic Pain: What We Heard. https://www.canada.ca/en/health-canada/corporate/about-health-canada/public-engagement/external-advisory-bodies/canadian-pain-task-force/report-2020.html.

to chronic pain exceed those of cancer, heart disease, and HIV costs combined. Improved access to adequate pain management through optimization of rehabilitation care and resources could help reduce our already burdened healthcare system.

Health Canada's own analysis estimates that achievement of just a one-percent reduction in the number of Canadians living with chronic pain could translate into annual savings of up to \$188.5 million in direct healthcare costs and more than \$232 million in indirect costs by 2030.7

As frontline health providers in primary care — often the first professionals from whom patients seek care — physiotherapists intimately understand the nature and complexities of Canadians' struggles with pain and the transformative potential of non-pharmacological treatments, including innovative, effective practices such as online pain management. We believe real change and relief are possible for Canadians through an interdisciplinary approach that harmonizes pharmacological and non-pharmacological treatment options.

Over the next 20 years, the number of Canadians aged 65 and older is expected to grow by 68% to 10.4 million.8

Other marginalized populations affected by chronic pain:

- People living in poverty
- Individuals with mental health and substance use disorders
- · People working in the trades and transportation industry
- Veterans
- Indigenous peoples
- Certain ethnic and racialized communities
- Sexually and gender-diverse persons
- Those who have experienced past trauma or violence
- Persons with disabilities
- Women

 $^{^{6} \,} Lynch \, M. \, E. \, (2011). \, The \, need \, for \, a \, Canadian \, pain \, strategy. \, Pain \, research \, \& \, management, \, 16(2), \, 77-80. \, \\ \underline{https://doi.org/10.1155/2011/654651}$

⁷ Health Canada. (2021). (rep.) An Action Plan for Pain in Canada.

⁸ Canadian Institute for Health Information. (2022). Canada's Seniors Population Outlook. Retrieved from: https://www.cihi.ca/en/infographic-canadas-seniors-population-outlook-uncharted-territory#:~:text=Over%20the%20next%2020%20years,sits%20at%20about%206.2%20million.

Success Factors

The recommendations of the CPTF provide a roadmap for positive change in pain management. Success will only be achieved, however, if our collective efforts are shaped by the following success factors.

1

A chronic care model in the health care system: Reinvention of the healthcare system to complement an acute care model with a chronic care model — one that recognizes the importance of managing pain from early onset after injury or surgery, across disease, and throughout the rehabilitation journey.

Many people develop chronic pain following an injury at home or work, through sports or motor vehicle accidents, or following surgery or the onset of disease. Early intervention is critical to managing and resolving pain, and to preventing complications such as the development of chronic pain.

The Canadian healthcare system was built on a curative healthcare model — treating patients' pain symptoms after they have set in — rather than a rehabilitative healthcare model geared toward recovering function, pain management, and preventing the development of chronic pain. To solve the pain crisis, a fundamental rethinking and restructuring of the healthcare system, including support for the expansion of research efforts that focus on prevention, will be essential, and physiotherapy will need to be better integrated — to the same extent as traditional care providers such as physicians.

2

An evidence-based care approach powered by a new partnership between physicians and physiotherapists: Establishment of collaborative working relationships between medical doctors and physiotherapists as the first access points for most people suffering from chronic pain.

In Canada's current healthcare model, many patients living with pain seek support from physicians as their primary care providers. Others will choose to see physiotherapists and other non-physician care providers, in what is often considered an 'optional' care path. To transform the experience of people living with pain, these two care paths need to come together in a harmonized care partnership that will truly serve the needs of patients — balancing the use of pharmacological care approaches by bringing non-pharmacological solutions to the table at the same time or as a first option. Interdisciplinary care plans should be implemented that consider rehabilitation needs and functional health (i.e., ability to work) to better support patients over the longer term as they manage their pain.

To date, rehabilitation has often been seen as a disability-specific service needed by a minority of people. Despite its individual and societal benefits, it has been underprioritized and under-resourced in countries around the world.⁹ That needs to change.

⁹ Cieza, A., Causey, K. et al. (2020). Global estimates of the need for rehabilitation based on the Global Burden of Disease study 2019: a systematic analysis for the Global Burden of Disease Study 2019. The Lancet. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32340-0/fulltext

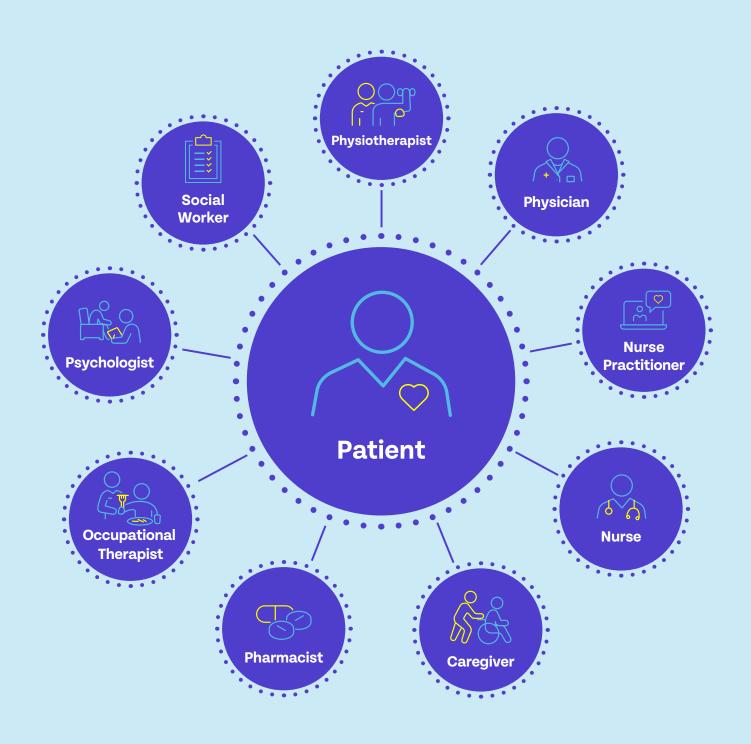
"The profile of human health is changing across the globe such that the burden of noncommunicable diseases (NCDs), particularly musculoskeletal conditions, is becoming more profound. Such change demands that health systems adapt to better support people in maintaining a functional health state and quality of life, as life expectancy continues to increase. Indeed, the need for such change aligns with United Nations (UN) sustainable development goal 3 of 'good health and well-being.' " 10



¹⁰ Briggs, A. M., & Dreinhöfer, K. E. (2017). Rehabilitation 2030: A call to action relevant to improving musculoskeletal health care globally. Journal of Orthopaedic & Sports Physical Therapy, 47(5), 297–300. https://www.jospt.org/doi/10.2519/jospt.2017.0105

A Harmonized, Interdisciplinary Approach To Pain Care

A biopsychosocial solution: non-pharmacological and pharmacological care working together in partnership





Adoption of innovative non-pharmacological practices: Recognition of the importance of non-pharmacological pain management to keep Canadians living well, actively, and autonomously.

Transformative change will require a modern, interdisciplinary approach to patient care that combines the best non-pharmacological services and treatment with pharmacological solutions as needed. As the CPTF Action Plan emphasizes, biological, psychological, spiritual, environmental, and social factors influence individuals' experience of pain. Like other diseases, chronic pain is best understood within a biopsychosocial framework and its treatment should integrate pharmacological, physical, psychological, spiritual, self-management, and other approaches as appropriate.

Among non-pharmacological treatment options, there are available today several effective, innovative approaches, such as online pain management through telehealth¹¹ and virtual therapy sessions, and use of virtual reality (VR) technology to reduce acute and chronic pain.^{12, 13}



Universal funding for non-pharmacological solutions: Subsidized access to physiotherapy and other essential non-pharmacological forms of care.

Physiotherapy and other forms of non-pharmacological care (e.g., psychotherapy) are effective only if Canadians living with pain can access them.

Currently, universal healthcare programs do not fund these services to the same degree as invasive medical procedures and pharmacological treatments. Policy changes are needed to make non-pharmacological pain treatments affordable and access equitable.



Increased access for populations in greatest need: Collaborative care to enable effective long-term pain management, rehabilitation, and support.

Access is a significant barrier for all Canadians, and especially for certain segments of the Canadian population, including older adults living with frailty, persons with disabilities, veterans, and Indigenous Peoples. Greater collaboration between physicians and physiotherapists, along with funding support to open access to non-pharmacological care, would provide new hope for those suffering most severely.

Increasing equitable access for these populations would create new opportunities for all groups to alleviate the burden of chronic pain, increase functional health (e.g., their ability to work), and maintain function and quality of life. It would also allow older adults living with frailty to live in their homes and communities longer and avoid a move to long-term care prematurely (as well as the associated financial costs), while opening access to underserved groups, such as people living in remote regions of the country and those with low socioeconomic status, who often can only seek pharmacological care because they have no insurance coverage for non-pharmacological services.

Integrating physiotherapy services more comprehensively into inter-professional or family health teams (FHTs)/community health centers (CHCs) in publicly funded settings holds much promise. Though not currently common in Canada, this practice would open access to publicly funded physiotherapy for more Canadians.

¹¹ Snoswell, C. L., Chelberg, G. & Smith, A. C. (2021). The clinical effectiveness of telehealth: A systematic review of meta-analyses from 2010 to 2019. Journal of Telemedicine and Telecare. https://journals.sagepub.com/doi/10.1177/1357633X211022907.

¹² Mallari, Brian, et al. Virtual reality as an analgesic for acute and chronic pain in adults: a systematic review and meta-analysis. Journal of Pain Research 12 (2019): 2053.

¹³ Shebib, Raad, et al. Randomized controlled trial of a 12-week digital care program in improving low back pain. NIH National Library of Medicine. NPJ Digit Med. 2019 Jan 7;2:1. doi: 10.1038/s41746-018-0076-7. eCollection 2019. https://pubmed.ncbi.nlm.nih.gov/31304351/.



Recognition of the value of prevention practices: Culture change in Canada to promote chronic pain prevention, encourage early treatment for pain, and promote awareness of pain management and rehabilitation options.

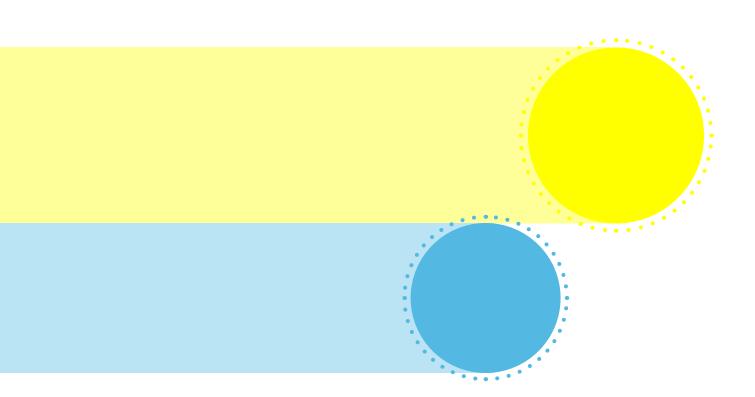
As the CPTF Action Plan states, policy change alone will not be enough to solve the chronic pain crisis in Canada. Culture change will be equally essential. This includes building awareness of the value of prevention practices to avoid the onset of chronic pain, such as improved nutrition, healthier built environments, improved sleep, increased physical activity, and supports for mental health and resiliency. It also includes raising awareness about the importance of treatment and rehabilitation after an injury or surgery, providing education on the nature and range of treatment options available to Canadians, and endorsing physiotherapists and other non-pharmacological practitioners as valuable, regulated healthcare professionals.

The creation of Pain Canada is a positive step on this front, providing the vehicle to drive culture change. Physiotherapists are key players who need to be included.



Financial support for advanced clinical education on pain: Funding to upgrade the training of physicians, physiotherapists, and other regulated healthcare practitioners to establish a cohort of chronic pain experts.

To realize the CPTF's Action Plan for Pain, Canada will need to deepen the expertise of its care providers, especially outside metropolitan areas. Financial incentives will be required to entice clinicians to obtain pain management specializations, and universities will need funding support to update their curricula. Only with this kind of effort will we be able to establish solid expertise and capacity in chronic pain management.



Where Physiotherapy Can Help

Ninety percent of physiotherapy patients seek support because they are in pain. Indeed, our profession is built on pain management and rehabilitation, dating back to its origins in World War I treating the traumas of injured soldiers. This gives physiotherapists unique experience and expertise, and puts us in a strong position as key healthcare players to inform and guide change in how pain is managed in Canada – aligned with the recommendations of the CPTF **Action Plan**.

The Action Plan included a number of recommendations for each of its six goals. Following is a summary of the key areas where the physiotherapy profession can contribute – working in partnership with physicians and other health professionals to lead the non-pharmacological side of the solution.

"The evidence of the human experience and complexity of pain has evolved so dramatically... We now know that pain is a far more complex pathological model which goes far beyond tissue and pain gates. We must consider emotions, beliefs, and present/past experiences, as all of these have the capacity to not only change an individual's pain experience but the actual physiology of the individual with pain... We know treating a patient outside of a biopsychosocial spiritual model of care frequently leads to failure... Lack of acknowledgement of the complex immune and neurological changes and their impact on the individual can also lead to failure."14

– Janet Holly, Guest Editor, Physiotherapy Practice Magazine – Pain Science Edition – April 2022 "Physiotherapists play an essential role in managing pain and pain-related disability across the health care continuum. Over the past 60 years, there have been dramatic advances in both fundamental and clinical research that can help physiotherapists

fulfill this role"

- Wideman et al, 2018

¹⁴ Holly, J. (April 2022). Message from the Editor. Physiotherapy Practice Magazine - Pain Science Edition.

¹⁵ Wideman, T. H., Miller, J., Bostick, G., Thomas, A., & Bussières, A. (2018). Advancing Pain Education in Canadian Physiotherapy Programmes: Results of a Consensus-Generating Workshop. Physiotherapy Canada. Physiotherapie Canada, 70(1), 24–33. https://doi.org/10.3138/ptc.2016-57

About Physiotherapists

Physiotherapists are skilled health professionals who assess, diagnose within scope, and analyze the impact of injury, disease, disorders, or lifestyle on movement and function. Physiotherapy is a health profession that promotes physical activity and overall health; prevents and rehabilitates disease, injury, and disability; and manages and improves acute and chronic conditions, activity limitations, participation restrictions, and physical performance through intervention and education. Physiotherapists are trained to use diagnostics and assessment procedures and tools to develop and implement preventive and therapeutic courses of intervention to promote optimal mobility, physical activity, and overall health and wellness. Physiotherapists work with people in one-on-one or group-based settings. They provide treatment in all health care settings including hospitals, long-term care facilities, home care, community-based clinics, schools, private practice clinics, and primary care networks, in workplaces and in research settings. Working with patients, physiotherapists promote independence and prevent injuries and disability, addressing conditions such as:

- · Heart and lung disease related sequelae
- Musculoskeletal injuries (sprains, strains, fractures)
- Stroke, brain injury, spinal cord injury
- · Cancer related sequelae
- Incontinence and pelvic dysfunction
- Chronic pain and chronic conditions (e.g., diabetes, arthritis, osteoporosis)
- Pre-operative preparation and post-surgery recovery

Source: Ontario Physiotherapy Association https://opa.on.ca/; Canadian Physiotherapy Association https://physiotherapy.ca/;



ACTION PLAN GOAL

GOAL 1:

Enable coordination, collaboration, and leadership across Canada

GOAL 2:

Improve access to timely, equitable, and personcentred pain care

ROLE PHYSIOTHERAPY CAN PLAY





ACTIVITIES OF RELEVANCE

.

- Recommendation: Developing a mechanism for collaboration
- Recommendation: Determining funding eligibility for chronic pain care
- Recommendation: Spreading care innovations to pan-Canadian health organizations
- Recommendation: Empowering provinces and territories to develop a pain strategy
- Recommendation: Increased funding for prevention and treatment

- Recommendation: Develop a human resources strategy to build pain specialist capacity
- Recommendation: Mechanisms to support coordination as patients navigate the system
- Recommendation: Expanded access to forms of treatment
- Recommendation: Establishment of a national mechanism to share guidance and best practices, development of a suite of indicators, and creation of an online portal of resources

WHERE WE CAN CONTRIBUTE

Physiotherapy can act as a colead with physicians:

- Providing a non-pharmacological and rehabilitation perspective
- Sharing insights related to the painpatient experience and funding barriers
- Highlighting opportunities for interdisciplinary partnership
- Clarifying inconsistencies across provincial jurisdictions with respect to care services and access

Physiotherapy can act as a colead with physicians:

- Through subsidizing equitable access
 to physiotherapy care as part of
 an expanded universal healthcare
 coverage to balance overreliance on
 pharmacological treatments (e.g.,
 opioids) by increasing accessibility
 to non-pharmacological treatments
 (e.g., physiotherapy), especially
 in disproportionately affected
 populations who often do not have
 adequate insurance coverage
- Sharing knowledge of patients' challenges with system entry and navigation
- Providing experience on the effectiveness of various forms of physiotherapy
- Developing the non-pharmacological and rehabilitation side of an information portal with resources, a knowledge base, assessment protocols, and treatment indicators

ACTION PLAN GOAL

GOAL 3:

Increase awareness, education, and specialized training for pain

GOAL 4:

Support pain research and strength-related infrastructure

ROLE PHYSIOTHERAPY CAN PLAY





ACTIVITIES OF RELEVANCE

- Recommendation: National awareness campaign
- Recommendation: Helping care staff better link people to resources and supports
- Recommendation: Educating clinicians, empowering college leadership to create a sub-specification in pain management
- Recommendation: Developing equity guidelines and policies

- Recommendation: Convening charities and NGOs to discuss the importance of pain research
- Recommendation: Researching the science of pain, identifying optimal clinical care models of care, expanding research into populations affected disproportionately by pain
- Recommendation: Launching supports for early career trainees in pain disciplines

WHERE WE CAN CONTRIBUTE

Physiotherapy can act as a key informant:

- Bringing a non-pharmacological and rehabilitation perspective to support Pain Canada in the development of its awareness-raising and culture-changing efforts
- Being part of the team of educators and healthcare profession colleges and regulators who build pain specialization programming
- Advocating for funding for academic institutions to embed pain care into curriculums (P. 17 in this document- see 'a national pain management competency profile that would guide entry-level physiotherapy education in Canada'), and for continuing education/specialized training on pain for clinicians in practice
- Sharing insights about access barriers faced by marginalized populations to support development of equitable care guidelines

Physiotherapy can act as a co-lead:

- Consulting with CIHR decision-makers as they launch new calls for research
- Encouraging better funding for physiotherapy academics, clinicians, and clinician-scientists in projects researching non-pharmacological care effectiveness and rehabilitation quality
- Advocating for funding to develop models of care catered to chronic health conditions (e.g., chronic pain) to evolve the health system beyond its current acute-care design

ACTION PLAN GOAL

GOAL 5:

Monitor population health and health system quality

GOAL 6:

Ensure equitable approaches for populations disproportionately impacted by pain

ROLE PHYSIOTHERAPY CAN PLAY





ACTIVITIES OF RELEVANCE

- Recommendation: Improve the ongoing, systematic collection, analysis, and reporting of health data to monitor pain incidence, prevalence, impact, and health outcomes over time
- Recommendation: Integrate pain indicators and measures into other government strategies, policies, and plans, including those for chronic diseases, mental health, and substance use disorders
- Recommendation: Further analysis
 of the direct and indirect costs of
 chronic pain in the most affected
 groups of the population
- Recommendation: Engage First Nations, Inuit, and Métis Peoples, clinicians, Elders, youth, and Knowledge Keepers to identify priorities for improving pain management in communities and for Indigenous Peoples living with pain in urban, rural, and remote community settings, including the best ways to reach these communities
- Recommendation: Develop pre- and postlicensure chronic pain competencies and education programming for health care professionals involved in the treatment of mental health disorders and those working in multidisciplinary pain clinics to ensure people living with mental illness have access to equitable pain care
- Recommendation: Support the expansion of specialized services for painful conditions experienced predominantly by women (e.g., pelvic pain, fibromyalgia, myalgic encephalomyelitis/ chronic fatigue syndrome)

WHERE WE CAN CONTRIBUTE

Physiotherapy can act as a co-lead:

- As rehabilitation professionals, identifying and monitoring outcome measures related to functional health, rehabilitation, and disability
- Tracking the impact of better access to non-pharmacological care versus use of opioids, surgery, or pain clinic services

Physiotherapy can act as a key informant:

- Sharing experience on populations disproportionately affected by pain
- Providing insights on the barriers patients face to accessing care in the public sector (e.g., waitlists and eligibility restrictions) and in the private sector (e.g., insufficient insurance coverage)
- Sharing perspective on how the lack of chronic pain specialists outside
 Canada's major cities impacts patients

Competency Profiling for the Canadian Physiotherapy Context

A recent article published in the **Canadian Journal of Pain** presented findings from a CIHR-funded study to develop a national pain management competency profile that would guide entry-level physiotherapy education in Canada. The competency profile created includes 15 competencies divided into two domains — one focused on specific aspects of pain management and the other on competencies relevant to all aspects of pain management. Building on this profile, future research will be needed to detail the content relevant to each competency, develop curriculum guidelines for pain education in Canada, and understand potential barriers to implementation. ¹⁶

Partnerships with Physicians: Enhancing Care and Reducing Wait Times for Physician Services

Successful innovative projects¹⁷ at the Montreal Children's Hospital and the CHU de Québec-Université Laval have effectively shown the value of having physiotherapists in the ER, demonstrating the value of physiotherapists with expanded scopes of practice and providing a prime example of effective partnership with physicians.

In orthopedic clinics, physiotherapists can help to reduce wait times for orthopedic surgery services through screening of medical records and appropriate diversion of those who do not need orthopedic intervention to conservative pain-management care, including physiotherapy care.¹⁸

¹⁶ Augeard, N., Bostick, G. et. al. (2022) Development of a national pain management competency profile to guide entry-level physiotherapy education in Canada. Canadian Journal of Pain, VOL. 6, NO. 1, 1–11.

¹⁷ Gagnon, R., Perreault, K., Guertin, J. R., Berthelot, S., Achou, B., & Hébert, L. J. (2022). Health-Related Quality of Life of Patients Presenting to the Emergency Department with a Musculoskeletal Disorder. ClinicoEconomics and outcomes research: CEOR, 14, 91–103. https://doi.org/10.2147/CEOR.9348138

¹⁸ Pike, M., Campagna-Wilson, L., Sears, K., Warren, R. Legay, D., & Trudel, D. (2021). Pilot study: The effectiveness of physiotherapy-led screening for patients requiring an orthopedic intervention. Journal of Military, Veteran and Family Health. 7. 3–15. 10.3138/jmvfh-2020-0060.

Conclusion and Call to Action

The physiotherapy profession is committed to leading and collaborating for change however possible, recognizing the urgency of the chronic pain crisis in Canada and knowing first-hand the struggles so many people suffering from chronic pain and its associated disabilities are living through. Physiotherapists are a key player for realizing the CPTF's Action Plan for Pain in Canada.

We are excited by the prospect of truly transforming the healthcare system to introduce more modern, interdisciplinary approaches that bring the best of non-pharmacological and pharmacological solutions to realization for Canadians. A paradigm shift and the funding needed to open access equitably for all segments of the population will be critical to realizing the vision.

The Canadian Physiotherapy Association welcomes the opportunity to consult further with the Chronic Pain Policy Team at Health Canada and all industry stakeholders to continue this important work.



What Success Looks Like



A chronic care model

Managing pain from onset through rehabilitation





Physiotherapist-physician partnership

An evidence-based, harmonized interdisciplinary approach





Innovative non-pharmacological practices

Including telehealth and online care





Universal funding for accessible non-pharmacological solutions

Expanding Canada's publicly funded universal healthcare plan to balance access to non-pharmacological treatment options (e.g., physiotherapy) with the high accessibility of pharmacological options, such as opioids



Increased access for populations in greatest need

By fully integrating physiotherapists into inter-professional and family health/community health care teams and improving pain specialization outside urban areas





Recognition of the value of prevention practices

Raising awareness among Canadians and empowering them to manage pain





Financial support for advanced pain management education

Investing in the development of more chronic pain experts among Canadian healthcare professionals

Physiotherapy & Pain Management

DID YOU KNOW?

Many marginalized populations, including Indigenous peoples, seniors, individuals with mental health and substance use disorders, veterans, women, and gender-diverse persons are disproportionately impacted by chronic pain.

Many people living with chronic pain lack access to non-pharmacological treatment options, and turn to substance use to cope with untreated chronic pain.

Physiotherapists believe relief is possible for Canadians through an interdisciplinary approach that harmonizes pharmacological and non-pharmacological treatment options.

Approximately 7.6 million

chronic pain. That number could grow to 9 million by 2030.

Canadians (1 in every 5) suffer from

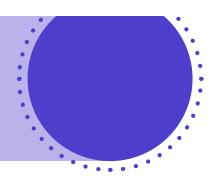
Recommendations to Health Decision Makers and Regulators

- A chronic care model in the health care system
- An evidence-based care approach powered by a new partnership between physicians and physiotherapists
- Adoption of innovative nonpharmacological practices
- Universal funding for nonpharmacological solutions
- Increased access for populations in greatest need
- Recognition of the value of prevention practices

Physiotherapists are ideally positioned to lead action toward better non-pharmacological pain management-as evidence-based care providers, educators and researchers.

Where Physiotherapy Can Help

As frontline workers and often the first professionals from whom patients seek care, physiotherapists deeply understand the nature and complexities of Canadians' struggles with pain.



GOAL 1:

Enable coordination, collaboration, and leadership across Canada

- Provide a non-pharmacological and rehabilitation perspective.
- Share insights and clarify opportunities for interdisciplinary partnership.

GOAL 2:

Improve access to timely, equitable and person-centered pain care

 Share knowledge and provide experience on the effectiveness of various forms of physiotherapy.

GOAL 3:

Increase awareness, education and specialized training for pain

 Bringing a non-pharmacological and rehabilitation perspective and being part of the team of educators, colleges, and regulators who build pain specialization programming.

GOAL 4:

Support pain research and strength-related infrastructure

- Consult with decision-makers as they launch new calls for research.
- Encourage better funding for physiotherapy academics in projects and advocate for funding to develop models of care catered to chronic health conditions.

GOAL 5:

Monitor population health and health system quality

- Identify and monitor outcome measures related to functional health, rehabilitation and disability.
- Track the impact of better access to non-pharmacological care versus use of opioids, surgery, and pain clinic services.

GOAL 6:

Ensure equitable approaches for populations disproportionately impacted by pain

 Provide insights on the barriers populations disproportionately affected by pain face in accessing care.

The economic burden of chronic pain is approximately \$60 billion.

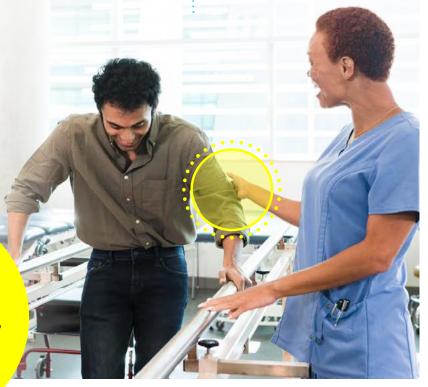
Achievement of just a

one-percent reduction

in the number of Canadians living with chronic pain could translate into

annual savings of up to \$188.5 million

in direct healthcare costs.







Advocacy for Pain Management

Neil Pearson, PT, MSc(RHBS), BScPT, BA-BPHE, C-IAYT, ERYT500 Physiotherapist, Yoga Therapist Clinical Associate Professor UBC Director, Pain Care U Education

I have not thought of myself as an advocate throughout most of my career. Apparently, the concept of advocacy, at least for me, is like the concept of pain for many of us – we might not stop "to think about what we think about it". Unlike advocacy, pain is something I think about every day. During contemplative practice, I continue to question, explore, and evolve my understanding of this complex human experience. Contemplating pain is part of me, as is teaching about it and integrating it into physiotherapy and yoga therapy. It is only now, when asked to write about advocacy, that I realize that this too is a big part of who I am, and what so many of us have been working on.

My first 10-12 years as a Physiotherapist were focused on growing as one – I was discovering what aspects of this profession were my future. If I was advocating for anything it was for me. Then, over the past 25 years or so, my focus turned outward. Not only did I turn to teaching, but to teaching a topic that most people did not think was needed. Success in teaching about pain required advocating for education about pain. Even today, health professionals, just like the yoga teachers and therapists I have taught, still resist learning about pain, and can even argue against the need for pain education when "they talk about pain all the time" in their pre-licensure education and their continuing education. Although awareness is growing, most still do not have a full awareness of the impact of pain on society, nor of the costs to the individual (biopsychosocial, spiritual and financial). Worse still, many have no idea that there are ways to help people living in pain beyond fixing what they consider to be a broken painful bit of anatomy or covering up the pain.

If you read my CV you will not see a section on advocacy. I think it is time to change that! Teaching has been the agent through which I have advocated for change. Teaching has also provided credibility and a way through which others can hear these not-so-popular and at times easily brushed-off messages about pain and pain care.

Advocating for pain care is not easy. We are trying to guide people to pay attention to three related and complex topics: pain, people living in pain, and pain care. Substantial changes are required in understanding and in actions related to each of these. Most people think they know everything about pain – because it is obviously what happens when the body is injured ("nociception is necessary for and the primary determinant of pain"). Further, it is not easy to advocate for pain care because we might be perceived as individuals who are taking advantage of the suffering of others to sell 'snake oil'. My experience has been that owning a business which provides education about pain care while also advocating for people in pain is often harshly interpreted as an unacceptable conflict of interest.

There has been an evolution of pain advocacy in Canada and around the world. I appreciate being part of it and receiving support and guidance from others who have pointed me in the right direction. Initially, in the late 1990s, I was focused on making changes within CBI Heath clinics in BC and western Canada. Advocacy was not needed, since these were internal staff education courses. Yet even then, the course attendance was competing with the more 'fix-it' courses in rehab. Next came making change through developing and presenting post-licensure courses to physiotherapists. This was less successful until Diane Jacobs contacted me, and started us (Diane, David, Lesley, Debbie, Susan, Mike, and Sebastian) on the path of creating the Pain Science Division. We believed that we might be able to raise our voices and impact pain education and pain care at the national level. It was around that time that my work shifted more to advocacy. It felt like we were a group working on a cause. Most physios do not know that our pain science group was originally rejected as a new CPA division and we needed to continue our work without CPA for some time. In retrospect, we might have encountered less resistance had we presented our views as something to add to physio care rather than a different approach to pain care. Even though people with persisting pain are not best served by physiotherapy that only holds a biomedical approach, we might have succeeded more with an offer of a biopsychosocial approach - one that was an option when anatomy, pathology and biomechanics don't provide the answer. Had we learned from those who understand advocacy and creating social change, the pain science division might be a couple of years older and further ahead.

We are trying to guide people to pay attention to three related and complex topics: pain, people living in pain, and pain care.



At the heart of our cause is an understanding that pain and pain-related disability are not immutable. At the heart of advocacy in pain care is the need to reach further and across professional boundaries.

Many family doctors do not have billing codes for people with chronic pain, so the funding agencies cannot see its burden. Maybe we can advocate with the doctors?

Physiotherapists typically provide the greatest volume of care to people in pain during interdisciplinary programs, yet we are rarely at the table with the Ministry of Health and other funders when complex pain management is discussed. Maybe we need to advocate for ourselves.

When patients succeed in getting back to meaningful life even though the pain does not resolve, funders and employers can treat the individual as a failure (as if this is not an equally worthy outcome). There is no question that patients need us to advocate for them.

Often times patients and patient groups feel as if they are fighting against giants. We can bring our power and knowledge to create positive change in their health care, but as a profession we might ask why we have done little to advocate for people in pain to date.

Advocacy groups like Pain BC, Pain Canada, and the People in Pain Network are wonderful non-profits which support the changes we need to decrease the impacts of pain on individuals and society. I was honoured to sit on the Board of Directors of Pain BC, to be a member of the first Canadian Pain Summit, and to work closely with Heather Divine and the People in Pain Network in bringing pain education to small communities across mainland BC and Vancouver Island. Through these groups, I learned the power of reaching beyond our profession to join passionate people with diverse experiences and skill sets while we advocated for pain care.

Recently I had the opportunity to advocate for Canadian veterans. Thanks to the prep work of many other advocates coming before me, and the willingness of Veterans Affairs Canada (VAC) to listen to evidence from science and from the lived experience of Canadian veterans, we made a positive change in the interdisciplinary care covered by VAC. As of Nov 2022, Canadian veterans have the option to receive yoga therapy as part of their interdisciplinary care. This experience clearly shows me the power of professions and patients joining together to advocate for change.

During the earlier years of Pain BC we joked about the difficulty of what we were doing as if we were "just trying to change the colour of the sky". We advocated for change in pre-licensure education and post-licensure education of health professionals, change in pain research funding, change in billing codes and practices, increase in the number of interdisciplinary clinics, development of community-based pain care and increased awareness that pain is an important public health and social issue. When we started the Pain Science Division, we had a similarly broad focus, yet within the Canadian physiotherapy world. In both organizations, there has been considerable change in some areas. Our voices have been heard above all the others calling for and directing change, which is impressive given that, unlike many other health care causes, pain care advocacy in Canada and in physio does not have a fundraising event, nor does it have a celebrity backing the cause. These two factors can be instrumental in creating change in Canadian health

Looking to the future, there are more pain-related issues on which I will advocate. I want the public and health professionals to understand the benefits of yoga as an option for people with persistent pain. I will also advocate for more patience and compassion for those who have not yet reconceptualized pain or are not ready to evolve their views on pain and pain care. Most of us start with a biomedical or biomechanical view of pain. Change takes time and effort. We often require embodied experiences to start the shift away from deeply embedded misconceptions about pain. Further, in order to evolve our understanding, we might require repetition of those embodied experiences to shift away from previous views. For this, yoga can be helpful. During the practice of yoga, embedded beliefs can be uncovered, and repeated biopsychosocial spiritual experiences (inconsistent with previous beliefs about pain and pain care) can take the role of educational agents. In other words, yoga can provide an embodied path of evolving our beliefs, influencing pain and learning how to move and live with more ease.

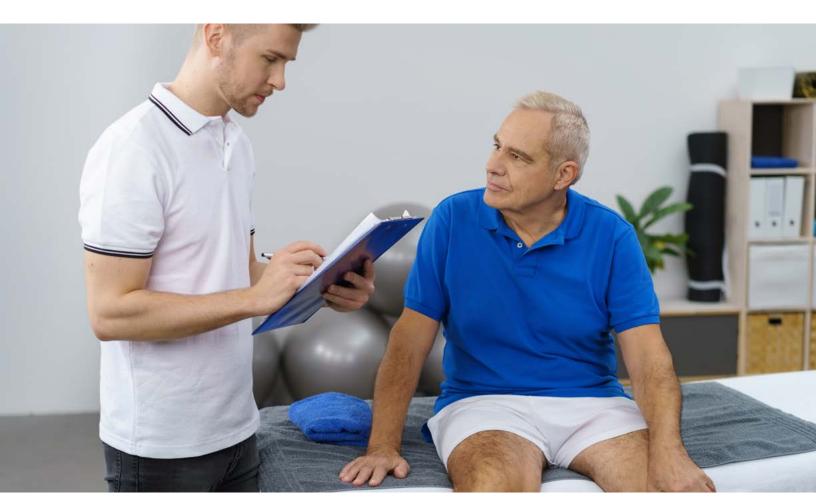
My final thoughts include a warning and hope. As an advocate, others can decide that we are biased and closed-minded. No doubt there are some who think I am against pain management that includes pharmaceuticals, that I teach all my patients yoga, and that the only way I educate patients about pain is the Explain Pain/Pain Revolution way. As an advocate, others can believe that our focus is criticizing their knowledge or clinical skills, and stating that we have all the answers. Judgements of others can be loud and powerful, taking away our voices, even at the expense of people in pain. However, these individuals are the reason for our actions. We believe that more people in pain will experience greater improvements when we align clinical practice with the evidence. There is hope. Sadly, many health professionals do not yet receive adequate pain education and are not confident in applying modern pain science to their patients. This unfortunately large gap is a reason for hope in our efforts to decrease the impact of pain on individuals and society. 🖥



Neil is a physical therapist, yoga therapist, author, researcher, Adjunct Professor at the University of British Columbia, faculty in three IAYT-accredited yoga therapy programs, board member for International Association of Yoga Therapists and pain care advocate. He is the

founding chair of CPA's Pain Science Division, and the recipient of awards honouring his work in pain care, patient education and physiotherapy by Queen's University, the Canadian Pain Society, and Physiotherapy Associations of BC and Canada, including the Canadian 2021 Medal of Distinction.

Neil conducts research into the effects of yoga on veterans with chronic pain and people with osteoarthritis. He is a consultant to Partners in Canadian Veterans Rehabilitation Services, and to Lifemark's 300+ clinics in Canada. Neil is a past board member for Pain BC, Canada's premier non-profit transforming the way pain is understood and treated. He co-authored – Yoga and Science in Pain Care 2019, authored the patient education ebook, Understand Pain Live Well Again in 2008, and is lead contributor to many free patient resources offered by Pain BC. https://paincareaware.com/.



Role of the Physiotherapist in pain assessment, management, and rehabilitation for older adults

Grace Liu, PT, BScPT, MBA, PhD **Helen Johnson**, PT, BScPT, MSc

Due to the demographic shift in Canada's population, or what is termed the 'silver tsunami', many clients or patients encountered in physiotherapy practice will be older adults who are living longer. As the population ages, more people are living with chronic health conditions associated with pain. Older adults typically live with one or more chronic conditions, many of which are accompanied by pain. Over 60% of long-term care residents live with persistent pain. Many older adults believe that pain is considered a 'normal' part of the aging process, which may lead to underreporting. Attitudes of 'stoicism' may also contribute to underreporting of pain in older adults, as reported by Helme & Gibson (2001). Additionally, patients with cognitive impairment (such as dementia or delirium) or communication issues (such as aphasia), may

be unable to complain of pain and as a result, pain may be unreported and under-recognized.³

Most of the literature on pain management has primarily focused on pharmacological treatment, with lesser research evidence dedicated to non-pharmacological approaches. However, interest in the role of non-pharmacologic approaches for managing pain in older adults is increasing. As identified by Hosseini, et al., (2022), considerations should be made to use non-opioid methods for pain. Since the use of non-pharmacological pain methods has been found to be beneficial for the elderly population, this short summary will detail the role of the physiotherapist in pain assessment, management and rehabilitation for older adults, including key points to consider for physiotherapy practice.

The challenges of pain assessment in older adults

Since pain is primarily evaluated by self-reporting methods, it can be difficult to assess, as there are no 'gold standard tools'. As documented in 'The Assessment of Pain in Older People: UK National Guidelines', Schofield (2018) reported "although subjective, patient self-report is the most valid and reliable indicator of pain, it may be necessary to ask questions about pain in different ways to elicit a response."6 The 'Numerical Rating Scale' uses verbal descriptors that can also be used with people who have mild to moderate cognitive impairment. For people with severe cognitive impairment, 'Pain in Advanced Dementia' is easy and simple to use and the 'Doloplus-2' scale has been translated into different languages. In addition, the 'Abbey Pain Scale' and 'Pain Assessment Checklist for Seniors with Limited Ability to Communicate' can be used to assess pain in older adults who have dementia or people with communication challenges.

The role of the physiotherapist in a team-based care model

Physiotherapists in all settings can play an important and pivotal role in addressing acute and chronic pain management for all individuals throughout their lifespans. As recommended by Schofield et al., (2022) in a summary report of clinical practice guidelines on the management of pain in older adults, the use of non-pharmacological strategies such as physiotherapy, cognitive behavioural approaches, TENS and acupuncture should always be considered, to reduce or eliminate the need for medications.⁸

Physiotherapists have the skills, training and knowledge to identify types of pain and its mechanisms. They are accustomed to working collaboratively with interprofessional teams to coordinate care. For example, for adults with low back pain where patients were first treated by a physiotherapist, there was less utilization of medical services and lower opioid use. Physiotherapists are well trained to assist physicians in their clinical decision-making during the process of pharmacological management of patients by providing information on pain severity and the need for adjuvant or breakthrough for pain control. As well, physiotherapists can work effectively with physicians to de-prescribe or assist with dosage reduction of pain medications.

Physiotherapists have the skills, training and knowledge to identify types of pain and its mechanisms.

Since there is a strong association between pain and depressed mood, loneliness and social isolation, it is important to recognize underlying mental health or social challenges. Clinicians need to be aware of these signs and symptoms, which should not be ignored. Other providers, such as a psychologist or social worker, may need to be involved in the care to provide cognitive (e.g., distraction) and behavioural (e.g., goal setting) therapies to help patients who are experiencing emotional difficulties. In a systematic review done by Wilson & Cramp (2018), there was evidence showing that physiotherapy combined with psychological interventions is more effective in comparison with physiotherapy alone in enhancing the physical functioning of adult patients with chronic pain. 11

The role of the physiotherapist in pain management

Physiotherapists can play an important role in assessing and treating individuals with chronic pain by providing them with education on pain and selfmanagement strategies. There is evidence suggesting that a physiotherapy-led chronic pain self-management program in primary health care improves function for people living with chronic pain. 12 In a multiple case studies design paper by Miller et al. (2017), the use of self-management strategies (including pain education and individualized exercise) provided by physiotherapists has the potential to improve function in some people with chronic pain in primary health care settings. 13 In addition, physiotherapists can provide self-management education to their patients, such as proper positioning, sleep quantity and quality, and the use of aids (i.e. orthotics). Prescribing assistive devices such as gait aids and raising seat heights can reduce stress and strain on painful joints. The use of modalities such as heat or ice can provide temporary pain relief, in addition to the use of TENS, biofeedback or laser. For older adults, manual therapy can be useful in reducing pain for some acute conditions more so than with chronic persistent pain.¹⁴

The role of the physiotherapist in active rehabilitation

Due to chronic persisting pain, physical inactivity is common in the older adult population resulting in decreased functioning, level of independence and quality of life. For older adults, active rehabilitation is important to maintain function while facilitating pain management. The role of physiotherapists is essential to monitor pain levels while providing the appropriate devices and progressing their exercises gradually to maintain and optimize their function. For hospitalized patients, as demonstrated in the Mobilization of Vulnerable Elders Ontario (MOVE ON) project, early mobilization was important in the prevention of functional decline. ¹⁵ In a



Exercise is increasingly identified as the first line in managing pain and musculoskeletal complaints or other conditions

These and other study results, provide a growing evidence base that therapeutic or general exercise programs are effective in improving pain, mood and functioning. Exercise needs to be tailored to the individual regardless of age and should include strengthening, endurance and flexibility exercises. ¹⁹ It is also important to understand the individuals' motivations and barriers to exercise adherence and support them to improve their understanding regarding the benefits of exercise. The pre-eminent Canadian scientists and physiotherapists, Dr. Teresa Liu-Ambrose and Dr. Linda Li (2022), summarized the importance of and offers insights on the efficacy of physiotherapy as a healthy aging and preventative strategy for chronic conditions. ²⁰

study done by Tate et al., (2022) in Alberta, clients who received home care physiotherapy once or more per week transitioned to long-term care later than those who did not receive physiotherapy service.¹⁶

For older adults living in the community, there is strong evidence demonstrating that active rehabilitation and exercise facilitate pain management in patients with osteoarthritis, as exemplified by the Good Living with Osteoarthritis from Denmark (GLA:D program http://gladcanada.ca/).17 Active exercise can strengthen muscles to provide increased support and reduce pain in joints such as the hip and knee. Exercise is increasingly identified as the first line in managing pain and musculoskeletal complaints or other conditions. Exercise should not be regarded as a secondary approach when conventional pharmacotherapy has failed to resolve/ mask the issues. A scoping review by Wiens (2022), highlights the role of rehabilitation for adults in opioid tapering and supports the notion that physiotherapy can provide an alternative to pain management.18

Key Points to Consider for Physiotherapy Practice:

(Adapted from Management of Persistent Pain in the Older Patient - A Clinical Review by Markis et al., 2014)

- 1. Determine your patients' comorbidities, cognitive and functional status, treatment goals and expectations, and social and family supports prior to initiating treatment.
- 3. Use a multimodal approach, including pharmacologic and non-pharmacologic treatments.
- 4. Develop a therapeutic relationship between your patients and their providers to review and evaluate the effectiveness of treatments, including pharmacologic and non-pharmacologic methods.
- 5. Set realistic goals with your patients to reinforce positive outcomes at each visit to demonstrate potential treatment benefits (e.g., increased ability to perform activities).
- 6. Provide education on physical activity, including a home program of therapeutic exercise and progress intensity depending on their pain levels.

Involve and engage caregivers to seek out other resources (e.g., community-based programs), or other movement-based programs (e.g., tai chi) that can help to augment treatment adherence and maintain treatment gains.

Summary

In summary, we presented the role of physiotherapists in pain assessment, management and rehabilitation for older adults, specifically providing targeted evidence to support non-pharmacological pain management approaches. In addition, we provided key points to consider for implementation within physiotherapy practice. Although further research is needed in the area of non-pharmacological approaches, we hope this short summary paper provides an overview to highlight the benefits of physiotherapy for pain management for this older adult population. The research evidence cited in this paper supports the work that physiotherapists undertake daily and can be shared with other stakeholders to demonstrate the value of physiotherapy

The Seniors' Health Division would like to acknowledge and thank Karla Andrews and Pasqualina (Lina) Santaguida for their insights towards the development and help with editing this paper. 3



Grace Liu, PT, BScPT, MBA, PhD, is a physiotherapist with 30 years of experience working in a variety of health care settings, including acute care, rehab, clinic, home care, geriatric outreach, reactivation and long-term care. Grace volunteers on the OPA Finance Committee, is the Educa-

tion Coordinator with the Seniors' Health Division of CPA, and serves on CPA's Division Working Group in Pain Advocacy. Grace completed her PhD in Health Policy and Equity which focused on health systems integration through inter-professional and cross-sectoral collaboration. Her post-doctoral research is on evaluating a patient navigator program to support older patients and their caregivers transition from hospital to home.



Helen Johnson, PT, BScPT, MSc, is a Clinical Specialist in Seniors' Health and currently the Communications Coordinator for the Seniors' Health Division of CPA. Helen has 30+ years of experience working in all areas of the health care system from acute care, rehabilitation, community care

and management roles. Helen worked for 15 years as a Geriatric Consultant in Specialized Geriatric Services, conducting comprehensive geriatric assessment and care planning for community-dwelling seniors. Her current role is Lead, Capacity, Access and Flow for Ontario Health, West Region, where she is supporting the implementation of best practices for a variety of patient populations, including frail and medically complex seniors.

References:

- 1 Knopp-Sihota, J., MacGregor, T., Reeves, J.T.H., Kennedy, M., & Saleem, A. (2022). Management of chronic pain in long-term care: A systematic review and meta-analysis. *JAMDA*, 23(9), 1507-1516. 2 Helme, R.D., & Gibson, S.J. (2001). The epidemiology of pain in elderly people. *Clin Geriatr Med*, 17, 417–31.
- 3 Hosseini, F., Mullins, S., Gibson, C. W., & Thake, D. M. (2022). Acute pain management for older adults. Clinical Medicine, 22, 4, 302-6.
- 4 Makris, U., Abrams, R., Gurland, B., & Reid, M.C. (2014). Management of persistent pain in the older patient a clinical review. *JAMA*, 312(8), 825–836. 5 Hosseini, F., Mullins, S., Gibson, C. W., & Thake, D. M. (2022). Acute pain management for older adults. Clinical Medicine, 22, 4, 302-6.
- 6 Schofield, P. (2018). The assessment of pain in older people: UK National Guidelines. Age and Ageing, 47, i1-i22.
- 7 Schofield., P. & Abdulla, A. (2018). Pain assessment in the older population: What the literature says. Age and Ageing, 47, 324-327. 8 Schofield, P., Dunham, M., Martin, D., Bellamy, G., Francis, S., Sookhoo, D., et al. (2022). Evidence-based clinical practice guidelines on the management of pain in older people a summary report. British Journal of Pain, 16(1), 6-13.
- 9 Frogner, B., Harwood, K., Holly, C., Andrilla, A., Schwartz, M., & Pines, J. (2018). Physical Therapy as the first point of care to treat low back pain: An instrumental variables approach to estimate impact on opioid prescription, health care utilization, and costs. Health Services Research, 53(6), 4629-4646.
- impact on oproug prescription, realin care utilization, and costs, realin services research, 53(6), 4629-4646.

 10 Schofield, P. (2018). The assessment of pain in older people: UK National Guidelines. Age and Ageing, 47, i1-i22.

 11 Wilson, S.; & Cramp, F. (2018). Combining a psychological intervention with physiotherapy: A systematic review to determine the effect on physical function and quality of life for adults with chronic pain. Physical Therapy Reviews, 28, 214-226.

 12 Brewer, E., Carnevale, N., Ducsharm, M., Ellis, N., Khan, M., Vader, K., & Miller, J. (2021). Physiotherapists' Experiences with and perspectives on implementing an evidence-based, chronic pain color management to recomment to recommend to the core of the programment of the core of the core
- self-management programme in primary health care: A qualitative study. Physiotherapy Canada, 73(2), 159-167.
 13 Miller, J., MacDermid, J.C., Richardson, J., Walton, D.M., & Gross, A. (2017). Depicting individual responses to physical therapist led chronic pain self-management support with pain science
- education and exercise in primary health care: Multiple case studies, Archives of Physiotherapy, 7(4), 1-12.

 14 Arnstein, P., & Herr, K. (2015). Persistent pain management in older adults. The University of Iowa College of Nursing. Retrieved from https://geriatricpain.org/sites/geriatricpain.org/files/2021-03/persistent_pain_guideline_2015_electronic.pdf

 15 Liu, B., Moore, J.E., Almaawly, U., Chan, W.H., Khan, S., Ewusie, J. et al. (2018). Outcomes of Mobilisation of Vulnerable Elders in Ontario (MOVE ON): A multisite interrupted time series evaluation of an implementation intervention to increase patient mobilisation. Age and Ageing, 47(1), 112-119.
- 16 Tate, K., Hoben, M., Grabusic, C., Bailey, S., & Cummings, C. (2022). The association of service use and other client factors with the time to transition from home care to facility-based care.
- JAMDA, 23(1), 133-140.
- 17 GLA:D Program. (2022). Retrieved from http://gladcanada.ca/
- 18 Wiens, M., Jarrett, D., Settimi, A., White, C., Hollingham, Z., & Packham, T. (2022). Role of rehabilitation in opioid tapering: A scoping review. Physiotherapy Canada, 74(1), 75-85. 19 Schofield, P., Dunham, M., Martin, D., Bellamy, G., Francis, S., Sookhoo, D., et al. (2022). Evidence-based clinical practice guidelines on the management of pain in older people a summary report. British Journal of Pain, 16(1), 6-13.
- 20 Liu-Ambrose, T. & Li, L. (2022). Physiotherapy for healthy aging. Physiotherapy Canada, 74(1), 1-3. 21 Makris, U., Abrams, R., Gurland, B., & Reid, M.C. (2014). Management of persistent pain in the older patient a clinical review. JAMA, 312(8), 825–836.



Conversations in Pain: Interviews with Pain Advocacy Leaders and Pain Care Professionals

The following is a series of interviews with physiotherapy professionals, health-care leaders and pain care advocates, including people living with pain. These discussions explore the perspectives, challenges and opportunities for the future of pain advocacy and care in Canada.

We extend our sincere thanks and appreciation to the CPA Pain Science Division newsletter editors, including Nathan Augeard, PhD(c), PT PhD Candidate, McGill University, and executive team for making the inclusionn of these important conversations possible.





A discussion with Keith Meldrum

Keith is a civil engineer technologist and Vice President of a civil construction company. He lives in Kelowna, British Columbia with his wife Barb, their Australian Labradoodle, Parker.

Keith has lived with persistent neuropathic pain since August of 1986, following a near fatal motor vehicle accident. The accident required multiple abdominal surgeries and over time he came to realize that despite the numerous surgeries, pain persisted. At the age of 19, he was told by his family physician that "everything that can be fixed has been fixed and this is all in your head". Despite this, Keith continued to seek medical interventions on his own to try and "fix" the cause of his pain but none of the interventions were successful. In 2004 he was referred to St. Paul's Hospital's Interventional Pain Clinic in Vancouver, British Columbia for consideration of spinal cord stimulation therapy.

As a result of the challenges Keith faced trying to navigate a health care system that did not understand the complexity of chronic pain, he decided to use his experiences to try to effect system change and help others that were also living with persistent pain. In 2012 he was appointed to the Board of Directors of Pain BC, a leading pain advocacy nonprofit in British Columbia where he served as the Vice Chair and the Chair of the Governance and Nominating Committee until 2018. Following that work, he has focused his attention as a personal pain advocate. This led to an invitation to present at the International Association for the Study Pain's 2018 World Congress and his appointment to the Global Alliance of Partners for Pain Advocacy, an IASP Task Force. Keith is also a member of Pain Canada's National Advisory Committee.

Keith has presents locally, nationally, and internationally, guest lectures at universities and delivers numerous webinars. He has coauthored two peer-reviewed research articles on persistent pain.

Nathan: Could you start by providing us with a brief background about yourself?

Keith: My name is Keith Meldrum and I live in Kelowna, British Columbia. I am the Vice President of a civil construction company, and work as a civil engineer technologist. I have been living in Kelowna for 11 years, I am married, and I have an adult son and a dog named Parker. When I'm not working, I spend a lot of my time on advocacy for those that have persistent pain because I have been living with pain since a near fatal car accident in the 1980s.

Nathan: Can you tell us a bit more about the pain management advocacy efforts that you are involved with?

Keith: I really got started on advocacy work back in 2011 when I first joined an organization in British Columbia

called PainBC. It has grown to be a leading organization for patient and pain advocacy not only in BC, but throughout Canada. I initially got involved because of my own journey with pain, which led to a six-year term with the board as the vice-chair of PainBC. After ending my term in 2018, I knew my advocacy efforts were not done but I did not know what I wanted to do. I continued as a personal persistent pain advocate and started making contacts and reaching out to organizations - and they started reaching out to me as well. Since 2018, I have done a lot of work both in Canada and internationally. I presented to a number of pain education conferences in the US and became one of the founding members of GAPPA, a task force of the International Association for the Study of Pain. GAPPA stands for the Global Alliance of Partners for Pain Advocacy and is still a developing organization. Currently, I also do research with McGill - we published a paper last November, and we're work-

Take the opportunity to be an educator and to talk about it with your colleagues. It's important to better understand pain, but also to translate that knowledge back to your colleagues.



ing on a grant for the next round of that research. I also co-authored a paper earlier this year with a team from University of Calgary, Stanford, and Harvard. I have truly developed an interest for the research and enjoy doing it.

Nathan: What is the importance of research for advocacy?

Keith: I think it's the most important thing. Over the last 10 years, there seems to be a shift in academia and even medicine. They are starting to try to understand pain a little differently and move away from just a biological model, or a biomechanical cause. However, research is missing an essential component: getting input and understanding from those that live with the disease. Whether it's pain or cancer or diabetes, it's critically important to have the people who live with that disease to help inform, educate, direct, and answer questions. I have been fortunate to be treated as an equal member of the research team and contribute as a co-author, as it should be done for participatory research.

Nathan: Can you tell us more about what advocacy looks like on a day-to-day basis?

Keith: It really depends on what I'm doing. Currently, most of my work is just done on my own as a personal pain advocate. It's a matter of getting your name or your work out there. On my side, I have published a few articles and I used to post regular blogs. PainBC introduced me to the importance of using Twitter to share relevant messages. I didn't know at the time, but there are subsets of Twitter (called med Twitter) where people share a tremendous amount of intellectual and scientific information. This is a key tool to raise awareness and get your word out there. Other than that, most of the work I am doing is guest lecturing to university health students – whether it's medicine, psychology, or physiotherapy – or sharing the complexity of living with pain. I am also speaking at pain education conferences and interdisci-

plinary education sessions at the local pain clinic. The main focus of my talks is really about the storytelling. Having a story to tell is not enough, it has to be told in a way that people can relate to it. You need to be able to take those challenging times and turn them into teaching moments. For example, the things that were not done well for me in my healthcare journey are now the things that I speak about as opportunities to improve.

Nathan: How does one start advocating?

Keith: Personally, I started by reaching out to organizations because I had this need or desire to share my experiences in a positive and useful way. More generally, it's a matter of raising awareness by putting yourself out there, getting noticed, and reaching out to organizations. For example, I have cold-called organizations and said: "Hey, I see this is the work that you are doing, I would be happy to answer any questions or help" and let them get back to me. And there are not many people doing the work that I am doing, so other organizations are starting to look for people to help them out. To add, in research, it is becoming mandatory to have someone with lived experience as part of the team when applying for funding.

Nathan: What would be some of the areas in pain management advocacy that you think are still unaddressed or not yet fully addressed?

Keith: Fundamentally, it comes back to understanding how complex pain is, at the system level. In fact, I would say that about any disease and mine happens to be pain. It is important to understand that pain is not just biological or biomedical, that it affects every aspect of one's life, and that it's not "all in your head" or psychological. Pain affects the totality of your life. It's this "death by 1000 cuts" every day. My story is just like everybody's. I don't sleep well, I have pain every day. When I go out into the world, I put on a different persona because I don't want

to be the person presenting what my pain looks like every day. But when I come home, that's where it all takes me. You carry it every day, a burden that just keeps weighing you down. And the perceptions of pain affect the physical pain, so it is really a cyclical, circular relationship. To add, there is still a large segment of healthcare that believes pain is purely biomedical. If they can't see it, image it, or scan it, it can't be real.

Nathan: I think advocating for this change by making better research and sharing experiences is really important.

Keith: Yeah, but it's tough. We are starting to see some change, especially compared to 10 years ago. We need to keep pushing and start trying to really understand this from the person who lives with it every day and explore how we can then translate that experience back and get that knowledge into schools and research.

Nathan: What can we do on our side to help with pain management advocacy?

Keith: Take the opportunity to be an educator and to talk about it with your colleagues. It's important to better understand pain, but also to translate that knowledge back to your colleagues. When you see people in the clinic who have pain – whether they've got the bulged disk or not – it is not always just the biomechanical issue. It's about exploring and understanding that they are human beings with stresses and issues, and how critically important that is to inform their pain. And I think that is where there is still a gap. While clinicians may understand that there are these other factors that influence pain, only a few understand that the things patients struggle with is the impact of pain on our everyday lives.

Nathan: There's almost this notion of helping others start questioning their approach, not necessarily telling them how to do it, but helping them think that pain might be more complex than what it sounds like initially.

Keith: Exactly, I refer to that as "planting the seed". And it's similar for people living with pain. Some patients might have built-up anger against the healthcare system because they are caught up in thinking that there is something wrong that nobody has fixed, and that clinicians have not tried hard enough. Both in clinicians and patients, you cannot simply flip the switch by saying "everything you have learned so far is wrong, here is what is right". But you can plant the seed that maybe, there is more to it. Here are some things to think about. And then let these seeds germinate and grow with them. Often, they will come back and start asking more questions or doing some reading on their own. This is when you will see change starting to happen. And this is where your role is important, to support patients and clinicians in navigating this new knowledge. It might not work for everyone, but I think it's the most effective way overall. That's how it happened to me. It was an unintended seed that was planted. And at first, I dismissed it. I thought it was a bunch of garbage and nobody knew what they were talking about. But you know, something caught my attention. And then over time it grew to where it was.

Nathan: Any closing words?

Keith: I really am truly excited to see this kind of work happening because advocacy is so important. If we don't continue to talk about this, pain will never be fully understood because it is extremely complex. Most diseases are, but the challenge with pain is that it's still not widely accepted in healthcare because it can't be seen, touched, or imaged. You are dealing with so much more with the person as a whole than just individual pathology. Having these conversations will drive the change forward.

Nathan: Some really powerful closing words!





A discussion with Virginia McIntyre

Virginia McIntyre is the President and Executive Director of the People In Pain Network.

Virginia developed persistent pain in 2009 after a shoulder surgery.

She holds a BA in Community Studies, a diploma in Radiological and Magnetic Resonance Imaging, and completed multiple courses in leadership development.

Virginia works extensively as a lived experience partner on research projects, many pain initiatives, and is a proud member on several committees which include; Pain Canada National Advisory Committee, Canadian Pain Society (CPS) Communication committee and PWLE Committee, and the Atlantic Mentorship Network Advisory Committee.

Virginia is a public presenter focusing on pain related topics with a committed diligence to increase awareness on chronic pain.

Nathan: Could start by providing us with a brief background about yourself?

Virginia: I am the President of the People in Pain Network (PIPN), which is a network that provides peer support to people living with pain. I organize the training for our facilitators, schedule speakers, and am a peer leader of several groups. I am also a pain advisor with several research groups and committees. More recently, I have lead the development of the very first Person with Lived Experience (PWLE) Committee within the Canadian Pain Society. I have also presented at local, national, and international conferences as well as community talks, and wherever I could raise awareness about pain. I am part of a provincial working group trying to implement a pain strategy for Nova Scotia.

Nathan: Could you describe your overall contribution to pain management advocacy?

Virginia: A lot of it really is sharing your story – sharing what has worked, what has not worked, what quality pain management looks like, and what gaps there are in the provincial healthcare system. Personally, I do a lot of it through presentations and talks. Advocacy can also happen when I am working with research committees. Sharing your experience can inform and sometimes even change the direction of research. Having the perspec-

tive of people who are living with pain, who have been through the system, and who have experienced what works and what does not work is essential. I am also advocating for pain management through peer support groups, where our role is to extend the quality care that people have received, keep the momentum going, and support each other through education. These groups also help to provide practical ways to use evidence and research, and how to apply this work in our lives.

Nathan: It sounds like there are two pillars. Sharing your experience as someone living with pain through your involvement with research, events, and policies. And then, sharing practical information to extend the continuum of care outside of the clinic, through the PIPN. Can you tell us a bit more about your input as a research team member?

Virginia: It depends on the research project, but it is mostly about highlighting where the needs are from the perspective of someone living with pain. Having the voice of people living with pain is also essential to make research more personal, to put real experiences behind the statistics, and to understand the value or importance of the project. Sharing what happens when you have ac-

By presenting to local peer support groups, providing support, doing research and meeting people with lived experience. More importantly, by listening.



cess to quality care, why that need should be addressed, what works and what does not will help produce research that can actually help people. Otherwise, it's hard to understand what is missing or what needs to be addressed when you have not lived through it.

Nathan: What about peer support, can you tell us more about its importance in pain management advocacy?

Virginia: The role of peer support is to educate and support. A lot of people living with pain feel isolated, they often don't get out of the house. Throughout their journey, some have lost friendships and family. Therefore, just having those connections and this support is huge. You can just have a bunch of strangers sitting there, chatting, and laughing. And they are not always talking about pain, just chatting. As for the education part, we really try to balance evidence-based information with practical strategies. We discuss how things work and could be integrated in our lives. It is also an opportunity for members to ask questions. What is nice is that group members have ownership over the content of these information sessions. They can identify topics that interest them and schedule a talk about it. This sense of ownership – realizing that it is their group – is really important for them. The shared lived experience really extends traditional care, it provides them with a deep sense of acceptance. I really think that there should be more peer support groups out there that provide a balance of education and support.

Nathan: How did you end up as an advocate for pain management?

Virginia: When I first developed chronic pain, I didn't share that with anybody because there is such a huge stigma. It took me almost 10 years before I shared with someone that I had chronic pain. I went to the Canadian Pain Society Conference and attended an afternoon for people with lived experiences where they shared their stories. And I thought, all right. I just started coming out. I have been volunteering with the Canadian Osteoporosis Patient Network for years, and I let them know after go-

ing there that I live with pain. They did not know this and asked if I would write an article, and that was the first article I wrote, sharing my experience on paper for the first time. From there, it just evolved. I talked to our pain clinic here and I said, you know, I think I want to help. We do not have a peer support group, so I started one. Coincidentally, there was a half-day meeting for physiotherapists about pain management. I asked the organizer if I could open the meeting. I took a deep breath and started sharing that I live with chronic pain and thanked them for being there. And from there, once you kind of put the words out there, they start flowing more and more. The peer support group just took off like that.

Nathan: By sharing your story, it opened new opportunities to become involved and help more people.

Virginia: Absolutely. From the start, my desire was to ensure that other people would not have to endure the journey that I had to endure in order to find care. Nobody should go through what I went through. I was really lucky that our pain clinic really embraced having a peer support group. They offered us a venue and helped get us off the ground. From there, I started to connect with new people – I started growing a network by introducing myself and saying this is what we do, this is what we need.

Nathan: How can we help, as physiotherapists interested in pain management?

Virginia: By presenting to local peer support groups, providing support, doing research and meeting people with lived experience. More importantly, by listening. Listening to the voice of people living with pain – making sure they have a seat at the table and a say in the process and feel welcome and accepted. We must also ask this question: how can we help?

Nathan: Any closing words that you want to share with us?

Virginia: Collaboration and working together is essential for pain management. Collaborating is a multiplication, not a subtraction. Working together makes us stronger.





A discussion with Susan Tupper

Dr. Susan Tupper is the Strategy Consultant for Pain Quality Improvement and Research with the Saskatchewan Health Authority. She is a licensed physical therapist with a PhD in Community Health and Epidemiology. Susan holds Adjunct Professor appointments with the University of Saskatchewan College of Medicine Departments of Anesthesia, Perioperative Medicine, and Pain Management, Pediatrics, and School of Rehabilitation Sciences. Susan's role with the health authority includes applied research, strategic planning, policy and clinical standards writing, and education for healthcare providers, trainees, and the public. Her patient-engaged research examines clinical interactions about pain for those with chronic health conditions, virtual reality for pain management, and education about pain for exercise instructors and family caregivers. Susan is a member of the Pain Canada National Advisory Committee and chair of the Board of Directors of the Saskatchewan Pain Society (SaskPain) a non-profit organization that aims to improve the lives of those living with pain in Saskatchewan.

Nathan: Could provide us with a brief background about yourself?

Susan: I got my physiotherapy degree in 1992 from Western University. I actually graduated, got married and bought my first car all in the same week. We moved to BC for my husband's master's degree, and I started working in a private clinic in Vancouver. I got to know the insurance system quite well because most of the people I treated had chronic pain. We then relocated to Saskatoon and ended up in the CBI system. After a few years in clinic, I went to U of S to do a PhD in community health and epidemiology. I was fortunate to be part of a CIHR strategic training initiative and focused my PhD on the relationship between physical activity and pain in kids with arthritis. After that, I did a postdoc in paediatrics pain before starting my current job at the Saskatchewan Health Authority (SHA) as their strategy consultant for pain quality improvement.

Nathan: Can you describe what your position as the strategy consultant for pain quality improvement looks like, on a day-to-day basis?

Susan: It really changes from one day to the next. Probably about two-thirds of what I do is research, centred on developing our provincial pain strategy and supporting

underserved populations. I am also leading a working group aiming to develop a provincial clinical standard for pain assessment and management. In addition to the standard development, we worked on additional support for the providers, assessment tools, and elements to facilitate implementation and documentation forms. Outside of research, I am actively involved in different educational opportunities, such as developing a learning module for healthcare providers about pain assessment and management for the province.

Nathan: It sounds like you are involved with a lot of projects! Could you tell us more about the advocacy efforts that you are involved with?

Susan: A lot of the work I do is interprofessional. For example, the clinical standard for pain assessment and management is intended for everyone who provides clinical care in the SHA. And because it is for all disciplines, for all types of patients, all types of pain, and for every point of access to care across the SHA, it is more focused on general principles of care. The broad themes we are including are aligned with IASP's new definition of pain – that chronic pain is a disease and not necessarily a symptom of some underlying tissue issue. Also, we cannot really measure pain but rather what people are expressing about this experience. The corresponding learning

We are essential components of the healthcare system and especially when it comes to chronic pain management.



module was really built using a collaborative approach across the SHA to ensure it was relevant to everyone. Another piece of my advocacy efforts is to work on developing an integrated pain strategy across the province. I am working with a number of different groups and people to try and build our pain services and make sure that there is good communication between the different groups. I am trying to raise the profile of pain management to the senior leadership team while helping them recognize the importance of high-quality care. Overall, I am trying to help care providers build the capacity to feel competent and supported in caring for people with chronic pain. To add to this, I am also trying to address stigma and marginalization in healthcare through my research projects towards people with chronic pain, and also towards people who use substances. Outside of the public system, I am the Chair of the Board of Directors of SaskPain. SaskPain is a non-profit organization external to the SHA and provides a source of information for pain management.

Nathan: How can we help in terms of advocating for pain management?

Susan: I guess it depends on where you are and what you are doing. Based on your situation, career stage and environment, there are a lot of ways to advocate for pain management. It could be at a one-to-one level by working with a patient and providing pain science information to help them reconsider the way they think about pain. It could be by helping patients advocate for themselves by discussing how to speak with their family physician or insurance agent. You can speak directly with their employers, family, coworkers, or teachers. You could also advocate by challenging misinformation and raising people's awareness about pain management. At a higher level, you can join groups dedicated to this goal such as the Pain Science Division, and you can offer to teach people about pain management during workshops, presentations, journal clubs and other events. Perhaps the biggest piece of advocacy for PTs is to recognize the importance of non-pharmacological approaches to pain management, and how physiotherapy is best suited to help with

this. Additionally, building a network of providers who can provide complementary care to your patients – such as family physicians, pharmacists, social workers or counsellors – is important. Overall, I would say it's about keeping your eyes open to opportunities and taking part in them.

Nathan: What are some of the areas that are not yet fully

addressed, in terms of pain management advocacy? **Susan:** I think that there is a growing awareness of the populations that tend to be marginalized, discriminated against, and lost in the system, and there needs to be a systemic shift. How can you provide good-quality pain management to someone who is struggling to find housing and has no possessions? Are you going to give them relaxation exercises and do a bit of manual therapy? It's hard to use the tools we have in any reasonable way. These issues need to be looked at from a systemic level. We need to wrap services around these individuals and preferably prevent this kind of thing from happening. There is a real need to help marginalized populations navigate the health system and access the resources they need. Essentially, the next level for advocacy is going after that structural stigma within our health system. The way that the policies are created, the way that the funding models are designed, and the way that the approaches to care are delivered contributes to the stigmatization of marginalized populations. I think that advocacy efforts should focus on recognizing that the system needs to change in order to help people with the most challenging needs and work towards that important goal.

Nathan: Do you have any closing words that you wish to share with us?

Susan: I always like to remind PTs that we are a cornerstone of pain management care and the value of what we offer as leaders in pain care should not be underestimated. We are essential components of the healthcare system and especially when it comes to chronic pain management. We cannot do it all by ourselves, but we can certainly organize, coordinate, collaborate, and find support for our patients. **3**





Telehealth in Children's Pain Care: The Future of Pain Rehabilitation

Brief Interview with Giulia Mesaroli of The Hospital for Sick Children, MScPT, BASc, PhD student
Giulia Mesaroli is a Physiotherapist at The Hospital for Sick Children (SickKids) and PhD student in Clinical Epidemiology at the University of
Toronto. Her clinical focus has been in the pediatric pain clinic at SickKids since 2015. Her graduate research is in the iOuch Lab at the SickKids
Research Institute under the supervision of Dr Jennifer Stinson. Giulia's research and clinical interest include pediatric neuropathic pain, complex
regional pain syndrome, and virtual reality. Giulia holds an appointment as Lecturer (status-only) in the Department of Physical Therapy at the
University of Toronto and has coordinated and instructed the pain science curriculum in the Master of Physical Therapy program.

Tell me about your role at SickKids, as well as your work and experience with telerehab. I'm a physiotherapist at The Hospital for Sick Children (SickKids). Most of my job is working in the ambulatory paediatric chronic pain clinic. We primarily see school-age children and adolescents with chronic pain conditions, including primary pain disorders (such as complex regional pain syndrome) and secondary pain disorders (pain related to a medical condition). I see patients as part of an interdisciplinary clinic and I also provide one-on-one physiotherapy treatment. Prior to the onset of the COVID-19 pandemic, approx. 5-10% of our visits were delivered virtually, typically to accommodate families who live far away from the hospital. Since the COVID-19 pandemic, our clinic has pivoted heavily towards virtual care to adhere to public health guidelines. At the start of the pandemic, our clinic quickly pivoted towards virtual care to adhere to public health guidelines that were in place at the time. At that time we saw nearly all of our patients virtually. Our clinic's advanced practice nurses spear-headed this pivot, navigating technologies, workflows, and administrative support. Our clinic's swift pivot to virtual care was published in the Canadian Journal of Pain.¹This allowed us to respond quickly to changes in public health guidelines throughout the course of the pandemic, offering virtual and in-person care as appropriate.

What questions or factors are key to consider when determining how to provide the best quality of care, virtually, to a child (case-by-case basis)? Many factors go into deciding whether the visit can be completed virtually or in-person. This decision is based on a combination of factors, including patient and family preference. Some factors we consider preferable for in-hospital visits include if the family does not have the requisite hardware, insufficient internet bandwidth, previous virtual care attempts have been unsuccessful, safety concerns, in-person physical

exam is imperative to diagnosis and treatment, and/or the patient is of very young age.

As you mentioned, your clinic shifted into a virtual model quite quickly. What hiccups or challenges did you face along the way? At first, our biggest challenge was developing workflows with technologies and getting staff up to speed on these new workflows. It was a lot of trial and error at first, using various technologies, constantly adapting and refining our processes. We also had to ensure that all staff had access to hardware, including microphones and webcams. Not only was our patient-facing care transitioned to virtual, but the way our team communicates was also transitioned to virtual modes. Our entire workflow, from booking patients to reviewing patients before clinic and patient rounds, was modified in a very short period of time.

What positives have come out of working in a virtual model?

Youth today are reporting increased pain and, if untreated, this pain can become chronic. At the start of the pandemic, the immediate benefit of virtual care was being able to continue to provide quality care while limiting face-to-face contact. Beyond the pandemic, we now have the capacity to provide additional rehabilitation services virtually. Our clinic surveyed patient satisfaction with virtual care after the pandemic, and more than half of the patients report that even if they have the opportunity for in-person visits, they prefer to have a visit via virtual care. There are many reasons why families may prefer virtual care, which are not solely related to reducing physical contact during the COVID-19 pandemic. Virtual care can often provide families with flexibility and convenience. The future of pain rehabilitation is using remote delivery methods and, now, we have established processes to deliver virtual care safely and effectively.

References

1. D'Alessandro, L.N., Brown, S.C., Campbell, F., Ruskin, D., Mesaroli, G., Makkar, M., & Stinson, J.N. (2020, August 20). Rapid mobilization of a virtual pediatric chronic pain clinic in Canada during the COVID-19 pandemic. Canadian Journal of Pain, 4(1), 179-180. doi: 10.1080/24740527.2020.1771688

CPA Career Centre

CONNECTING TALENT TO JOBS



Looking for a job in Physiotherapy or looking to find the best candidate for a vacancy? We connect great physiotherapists and physiotherapist assistants to great jobs across Canada and beyond.

Visit **jobs.physiotherapy.ca** today to start exploring the possibilities!



Building Bridges in Technology:

A Multidisciplinary Approach to Telehealth Education Amidst a Global Pandemic

Sara Abdo, School of Occupational Therapy, Faculty of Health, Dalhousie University

Emily Balkam, School of Communication Disorders, Faculty of Health, Dalhousie University

Jonathan Harris, School of Occupational Therapy, Faculty of Health, Dalhousie University

Carmel O'Keefe, School of Occupational Therapy, Faculty of Health, Dalhousie University

Daphne Pereira, School of Physiotherapy, Faculty of Health, Dalhousie University

Lynn Shaw, School of Occupational Therapy, Faculty of Health, Dalhousie University



Acknowledgements: We would like to thank the members of the Ad Hoc Advisory Committee of Clinicians and Educators across the Atlantic region for supporting the development of Introduction to Telehealth Practice. Additionally, thank you to those who were involved in the interviews shared with participants of each module. Your perspectives in the telehealth field were invaluable to everyone's learning.

Background

Telehealth has been a longstanding method of health care delivery in an array of populations and for a range of allied health needs. It has been used successfully to address the needs of people in rural communities and to reduce costs of travel.¹ Telehealth is a way to make universal health coverage achievable.² As such, the use ofinformation and communication technology (ICT) has become a mainstream method of health care delivery on a global scale.² Despite this, educational institutions have seldom incorporated the knowledgebase and skillsetsspecifictovirtualcare in their curriculum. Amidst the first wave of a global pandemic, health care providers, students, educational institutions, and the broader community were forced to come to terms with the country's new reality. For persons living with chronic pain, this meant:

- A reduction in access to health care services pertaining to pain management;
- · Increase in social isolation;
- · Increase in interpersonal conflict;
- Decrease in sense of independence and autonomy; and
- Exacerbation of social inequalities.3

The challenges associated with travel and transportation (e.g., travel distance and cost, lack of access to public transportation, weather, disruption in family and work schedules) may have impeded access to health care services for many individuals, including those with chronic conditions.4 Telehealth may overcome some of these challenges by increasing accessibility to services, increasing the frequency of contact, or improving the efficiency of services.4 Telehealth may also provide better access to team-based care or health care providers with more specialized expertise.⁴

To ensure continuity of care, health care delivery required a technological upgrade and innovation in learner placements. Following the cancellation of fieldwork placements, the interdisciplinary and collaborative team at Dalhousie University tackled this challenge, alongside an advisory committee of clinicians in the Atlantic region to pilot a continuing education opportunity, Introduction to Telehealth Practice.

Course Description

The inception of Introduction to Telehealth Practice brought together senior students at Dalhousie University in occupational therapy, physiotherapy, speech language pathology, and audiology and health care providers. Providers representing the same fields enrolled in the course from across the Atlantic region of Canada. These providers brought a range of practice experiences serving populations across the lifespan, as well as skills in telehealth practice. The pilotaimedtopreparestudentsand-cliniciansforfieldworkintelehealthandincludedmodules on the ethical implications of telehealth practice, tele-assessment, tele-intervention, tele-consultation, tele-supervision, and mentorship.

The five-module course also featured interviews from the telehealth practice field. Providers with varying experiences in virtual care were able to share their thoughts on matters pertaining to ethical and legal practice standards. They also spoke of their initial worries about switching to virtual care and described opportunities for capacity building for student supervision and care coordination across systems. The learning activities each also merged the experience of students about to enter practice with providers currently in practice. This intentionally allowed for informal mentorship tooccurthroughout the course, while building on the Canadian Interprofessional Health Collaborative (CIHC) interprofessional competencies of role clarification, interprofessional communication, and team functioning. ⁵

Testimonials

Learner Perspectives

Students in physiotherapy and occupational therapy engaged in the first three modules of the pilot while awaiting news of return to fieldwork. Once clinical education resumed, many students engaged in virtual care andwere able to apply their new learning. Their preparedness for the shift in health care delivery facilitated the development of a new clinical partnership within primary care. In this placement, students worked together to conduct a needs assessment, developaseries of programs, oneofwhichwasfocusedonchronicconditions, and see the program through in a virtual context. Educators from the pilot of Introduction to Telehealth Practice were able to hear from senior students about how the course was a bridge toworkinginthe "realworld" and also provided themwiththeskillstheyneededwhenlooking for work under the current climate.

In other contexts, students were able to experience care delivery in a hybrid format, bothusingin-personand-virtualencountersonplacement. One student on placement in a rural outpatient hospital clinic writes:

"Because of COVID-19, the clinic had a reduced caseload and increased relianceon telehealth services. Asaresult, only urgent patients could be seen in-clinicand the majority of subjective assessments were conducted via telephone or video call. Many patients found this approach to be more efficient and it allowed for improved therapeutic alliance and communication. They appreciated increased access to their providers, whether it be through telephone or email. Contacting patients while they're at home allows them to answer questions more honestly and accurately. I was able to provide immediate feedback on self-management strategies, such as the safe use of heat, ice, or positioning. Many patients, especiallyafterjointreplacement, benefit from physiotherapywithlimitedhands-ontechnique...Movingforwardintopracticeasanewgraduate, Ilookforwardto discussing my experience and advocating for the development of virtual physiotherapy."

Further to the student experience, and their preparedness for practice in a virtual world, students shared community feedback with clinical educators. Whether recovering post- operatively in the home or seeking guidance on self-management of a chronic condition, feedbackfromcommunitymembersindicatedthat, inatimelikethis, having aphonecheck-in from students on placement proved to be the guidance they needed to support them while isolated at home.

An Educator's Reflection

While the focus of the pilot was to build capacity of students and partners in the field,

co-designing and implementing the course brought perspectives to the surface that can only be appreciated by those on the front line. The rapid changes in public health measures brought all stakeholders involved in health care together to explore a new world. All involved had to adjust their approaches and ways of interacting with health care service. To succeed in this novel environment, all had to build on collective experiences and skillsets to survive. This pilot course became a microcosm of the larger community. It became an excellent example of how the shift to shared power can transpire in education and professional development between educators, providers, students, and community members.

Engaging educators, providers, and students in the process of developing course content also challenged current assumptions associated with offering or receiving care from a home or community centre. Quickly, the community's experiences of receiving care in their home became a focus of discussion. In some instances, the receipt of services in the home led to a greater sense

of comfort and security for clients, leaving them more engaged in the health encounter than was typically experienced in the clinic. Some providers reported that their assessments were more accurate, as observing clients in home allowed assessment tools to be more sensitive to the real-world environments. But, this is not the same experience afforded to those experiencing domestic violence or housing insecurity, or for those without childcare or reliable internet service for which their interaction in the health encounter would be limited.

In some cases, the provision of telehealth removed the "protection" typically provided by the clinic. Both provider and client were exposed to the home environment of the other. This has the potential to reveal that providers and clients are having similar life experiences in the midst of the pandemic and may tend to blur the boundary between personal and professional life.

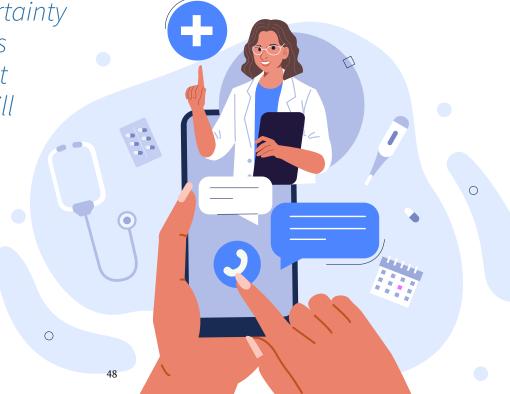
While advantageous in multiple contexts, for many people, the implications of having little other choice amidst a pandemic requires much depth and consideration. The implications of offering or receiving care from a home or community centre need further discussion and examination. As educators in this pilot, greater discussion and preparation is required to truly prepare the field for ever-shifting contexts.

Opportunitiesf or Future Offerings

There is a place for rapid innovation and curriculum shift within health care programs. Introducing telehealth into the curriculum was a necessity following spread of the COVID-19 pandemic. The pandemic has now created a shift in educational institutions and health authorities to reconsider the use of ICT in practice. Professional examinations by licensing bodies, such as that of the Canadian Alliance of Physiotherapy Regulators, are moving towards virtual clinical practice examinations for licensure. While there is little certainty amid a pandemic, it is becoming clearer that telehealth practice will now be more readily integrated into the provision of health care service.

Future offerings of Introduction to Telehealth Practice will deepen learner engagement in clinical simulation. In these, the course will work to deepen the diversity in clinical scenarios and contexts. It will go beyond assumptions associated with age and technological abilities or on the use of virtual care with persons using assistive and augmentative communication. By using simulated practice encounters, the course will prepare participants to respond to a range of situations experienced by clinicians and clients in the field. Experiential learning activities will deepen in fidelity and, as a result, deepen provider capacity for virtual care with all populations.

While there is little certainty amid a pandemic, it is becoming clearer that telehealth practice will now be more readily integrated into the provision of health care service.





Sara Abdo is an Occupational Therapist (OT) and instructor at Dalhousie University's School of Occupational Therapy. As an educator, she teaches mental health practice, and facilitates clinical education. Sara is a co-founder of the Introduction to Telehealth Practice course, initially

launched in the summer of 2020.



Carmel O'Keefe is an instructor at the Dalhousie School of Occupational Therapy. Carmel has a special interest in entrepreneurship and is dedicated to making OT accessible to populations traditionally marginalized by systems.



Emily Balkam is a Speech-Language Pathologist (S-LP) and S-LP Clinical Coordinator at Dalhousie University's School of Communication Sciences and Disorders (SCSD). As Clinical Coordinator, she is responsible for organizing, coordinating, and evaluating the clinical education

component of the SCSD speech-language pathology program.



Daphne Pereira is a Physiotherapist and Academic Coordinator for Clinical Education at Dalhousie University`s School of Physiotherapy. She is responsible for developing, coordinating and evaluating the clinical education component of the Entry to Practice Master's Program in Physiotherapy.



Jonathan Harris works as the fieldwork coordinator in the Dalhousie School of Occupational Therapy. Jonathan's research interests include practice education, simulation, interprofessional education and clinical reasoning.



Lynn Shaw is an Occupational Therapist, currently a Professor and Director of the School of Occupational Therapy at Western University, London Ontario. She conducts interprofessional education research to advance collaborative practice. Her primary research is founded on oc-

cupational science and supports UNDG's in the area of Decent Work, Good Health and Wellbeing.

References

1. Iacono, T., Stagg, K., Pearce, N., & Hulme Chambers, A. (2016, October). A scoping review of Australian allied health research in ehealth. BMC Health Services Research, 16(1), 543. doi: 10.1186/s12913-016-1791-x

2. World Health Organization (WHO) Global Observatory for eHealth. (2016, December). Global diffusion of eHealth: Making universal health coverage achievable - Report of the third global survey on eHealth [PDF file]. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/252529/9789241511780-eng.pdf;jsessionid=7224508989DAD37097F2C8730FE916BC?sequence=1

4. Speech-Language and Audiology Canada. (2006, January). The Use of Telepractice for SAC S-LPs and Ausiologists [PDF file]. Retrieved from https://www.sac-oac.ca/system/files/resources/sactelepractice_position_paper_english.pdf

5. McGill University Office of Interprofessional Education. (2010). Canadian Interprofessional Health Collaborative (CIHC) framework. Retrieved from https://www.mcgill.ca/ipeoffice/ipe-curriculum/cihc-framework

6. Canadian Alliance of Physiotherapy Regulators. (2019). 2021 Clinical Component. Retrieved December 11, 2020, from https://www.alliancept.org/taking-the-exam/exam-application-information/2021-clinical-component/



Using Kinesiology Tape in Physiotherapy Practice for Pain Management

Tiffany Tiu, B.Kin, R.Kin (inactive), CPA member since 2022

We are always striving for better pain management for patients. Better pain management improves patients' quality of life and addresses one of the barriers to exercise. Various modalities can be used to manage pain, for example, heat and cold packs, electrophysical agents like transcutaneous electrical nerve stimulation, massage, exercise, etc.1 What if there is another modality that is easy to use by patients themselves to manage their own pain? Kinesiology Tape (KT) has gained popularity over the past 50 years with over 150 thousand practitioners using it in their practice globally for various purposes,2 such as enhancing exercise performance, blood circulation, joint positioning, pain reduction, etc, despite ambiguous research evidence for many of these. My interest in pain science spurred me to look at the literature on KT and pain reduction. This article aims to present a brief overview of the literature on the potential role of KT as a pain management strategy and its implications for physiotherapy practice.

Mechanism of Pain Reduction by KT: The Gate Control Theory*

There are different proposed mechanisms by which KT relieves pain. The theory most referenced by studies is the Gate Control Theory. It states that Ab fibers, nerve fibers responsible for conducting touch signals, are bigger in diameter and faster in conduction velocity than those responsible for detecting pain, including Ad and C fibers. Stimulating the Ab fibers with touch will then stimulate the inhibitory neuron, thus modulating pain signals travelling to the brain. This mechanism of pain mitigation can explain the natural reaction to rub the area of pain after a painful event like bumping into something. It is thought that KT applied onto the skin provides a similar stimulation to touch, thus help mitigate pain signals travelling to the brain.

KT May Relieve Pain

To speak to the effectiveness of KT for pain reduction, a study has to compare the application of KT alone with a control group (no intervention) and demonstrate a significant difference between groups post-intervention. There are a few studies that show that KT alone was effective in pain reduction. In one study, twenty patients with unilateral anterior knee pain experienced a reduction in pain during stair ascending and descending immediately after the application of KT, compared to having no tape.4 Paoloni et al. compared the effect of KT alone, exercise and KT, and exercise alone in 39 patients with chronic low back pain (CLBP). All three conditions reduced pain to the same degree after four weeks, showing that KT alone was an effective pain management strategy in the study. 5 Castro et al. compared the effects of KT application (applied on the area) to sham KT (applied above the area) and found that KT was effective in reducing back pain in 60 CLBP patients, but not sham KT.6 The Gate Control Theory can explain the findings in these studies. When KT was applied to the site of pain, the cutaneous mechanoreceptor sends signals to "distract" the pain signal sent to the brain. A study demonstrated that the effectiveness of pain relief by touch decreases as the touch moves away from the painful site. 16 Therefore, it is not surprising that KT not applied to the area of pain is unable to contribute to pain relief.

A systematic review and meta-analysis concluded that KT is effective in reducing pain compared to minimal intervention. However, the authors highlighted that the heterogeneity between the studies is high, meaning that the studies vary greatly in their methodology, which makes it difficult to compare results. Furthermore, none of the studies report effect sizes, which are measures of

how meaningful statistical differences are in practice. So there is no way to know whether the pain reduction effect is substantial and meaningful, even though statistical significance was achieved. For example, in a study that found statistically significant pain reduction in taping the knee, the median effect on a pain scale was only a 0.5 reduction, which is lower than the threshold of minimal clinically important change: improvement of 1 on the scale of 0-10. It is reasonable to say that there is some evidence to suggest KT can have some effect on relieving pain, though whether the amount of pain reduction is meaningful is uncertain.

When interpreting these studies, it is important to consider the psychological effects of the interventions. It is impossible to determine whether the results are actually due to the intervention, or a general placebo effect. For example, experiencing care from the practitioner or believing and hoping that the tape will work could "trick" the mind to perceive pain relief. Yet, improving patient quality of life by decreasing pain experienced is one of the clinician's goals, whether it is from a psychological effect, physiological effect, or both. Some people wear a basic neoprene sleeve around their joint of complaint and experience pain relief, even though the sleeve may not be doing much for the joint. KT could be a low-risk and low-cost pain management strategy for patients seeking pain reduction.



^{*}The author is aware that the Gate Control Theory doesn't represent the full picture of the physiology behind pain modulation with touch. However, it is not inaccurate to use it to simplify or explain one of the pain modulation mechanisms. Readers interested in pain science can read Sufka, K. J., & Price, D. D. (2002). Gate control theory reconsidered. Brain and Mind, 3, 277-290. Recent discoveries also demonstrated that pain modulation with touch doesn't only happen in the spinal cord, but also in the primary somatosensory cortex. For more, read Lu, J., Chen, B., Levy, M., Xu, P., Han, B. X., Takatoh, J., & Wang, F. (2022). Somatosensory cortical signature of facial nociception and vibrotactile touch-induced analgesia. Science Advances, 8(46), eabn6530.

Application Technique May Not Matter

If the Gate Control Theory explains the pain reduction in patients post-KT application, does the technique of application matter as long as some tape is applied on the area of pain? Wilson et al. compared different techniques of taping on 71 subjects with patellofemoral pain syndrome (PFPS).9 The three different techniques are: taping that attempts to pull the patella medially, laterally, and no pull (just taping over the patella), all with Leukotape P (a non-stretchable tape commonly used in the McConnell Taping method to facilitate medial patellar glide). They found that all taping techniques reduced pain during a single step-down test compared to no tape. However, the no pull and lateral pull taping was found to provide a significantly larger reduction in pain compared to medial, and the difference was found to be clinically meaningful. The authors were unsure why neutral and lateral taping was superior to medial taping. However, this raises the question of whether we need a particular way of taping to address pain. The traditional way of taping PFPS is the McConnell Taping method. But a study comparing the pain reduction effect between McConnell Taping and KT found that only KT resulted in a significant difference in pain reduction compared to no tape. ⁴ This, again, questions the necessity of a particular taping method for therapeutic effects.

There are a few other studies that compared KT application to sham KT. Three studies compared KT applied with tension (expected to provide therapeutic effect) and KT applied without tension (sham condition). Thelen et al. studied 42 subjects with shoulder pain¹⁰ while Parreira et al. studied 148 subjects with LBP. 11 Both found that KT applied with and without tension has similar effects on pain relief. Their findings echoed the Gate Control Theory that any sort of light touch stimulus can distract the pain signals travelling to the brain. One study, however, suggested otherwise. Cho et al. studied 46 older adults with PFPS, comparing KT applied with and without tension. 12 There was improvement in pain in the KT group, but no improvement was found in the group that had KT without tension. The authors speculated that older adults may have a reduction in their sense of touch, which may warrant greater skin stimulation to elicit an inhibitory effect on pain signals.

The abovementioned studies cast the question of whether a particular taping technique is crucial to the extent of pain relief. Even though KT certification courses and KT application manual (eg., Kase, 2003¹³) exist to provide education on how to tape, full replication of "textbook techniques" is not necessary to see the results of taping for pain management. Rather, an understanding of pain physiology and human anatomy would suffice. Clinicians who would like to incorporate KT as a pain self-management strategy for patients can provide a brief education on how to tape for their pain concerns, and patients could implement this

on their own. In a Korean study, 69 older adults with knee pain were able to implement self-taping and experience pain reduction compared to no tape. 14 Yet, future studies should investigate how self-taping compares with clinician taping.

KT as an Adjunctive Therapy

Whereas having studies isolating KT as its own intervention is important for us to know that the effect of KT on pain reduction is not confounded with other interventions, it is not reflective of typical rehabilitation settings where multiple interventions are used. It is therefore worth seeing whether KT used in conjunction with other forms of therapy provides an additive effect on treatment outcomes.

Exercise is an essential component of therapy

Although KT can be effective in managing pain, it cannot replace exercise and it cannot deliver the benefits of exercise. Devereaux et al. randomly allocated 100 patients with subacromial impingement into three groups: KT with exercise group, NASID with exercise group, and exercise alone group. After a two-week intervention period, all three groups experienced decrease in pain when compared to pre-intervention, and there was no significant difference between the groups on all outcome measures. This suggested that exercise alone is as effective as exercise with KT, which means that KT did not provide any additional effect on pain relief in this study. Pain relief through exercise alone can be explained by the exercise-induced hypoalgesia phenomenon.¹⁷ In the previously mentioned study by Paoloni et al., even though all groups (KT with exercise, KT alone, and exercise alone) experienced similar pain relief, only the exercise alone group demonstrate a reduction in disability. These studies suggest that KT cannot be considered a substitute for therapeutic exercise.

KT may help with early exercise intervention

Is there any value in using KT as an adjunctive therapy? Therapy has multiple purposes and pain relief is only one of them. While exercise is what ultimately improves function, one can question whether having KT as a pain relief strategy can facilitate therapeutic exercises. Kaya et al. randomly allocated 60 participants with shoulder pain into KT with exercise group or physiotherapy modalities (PT) (ultrasound, TENS, and hot pack) with exercise group. 15 After the first week of intervention, the KT group reported a significantly greater reduction in pain from baseline, compared to the PT group. However, there was no significant difference between the two groups in the second week of intervention, with both groups reporting significant pain reduction. If immediate pain management is desired, for example, to allow exercises to be done with less pain and apprehension, KT may provide short-term pain relief better

than traditional physical therapies to allow earlier excise intervention. However, it would be interesting to see future studies looking at KT-related pain relief and long-term exercise adherence.

Conclusion

KT is likely able to provide some pain relief effects, which can be explained using the Gate Control Theory. However, the clinical significance of the results were unclear. KT application technique doesn't seem to matter as long as the tape is applied on the area of complaint. This could facilitate patients' pain self-management using KT if desired. Finally, the literature is less certain about the added benefits of KT when used with other treatment modalities. It could serve as a basic pain management strategy, but it should not replace exercise, which is the primary means of improving function and decreasing disability. Clinicians can explore the option of using KT for pain management as a strategy to improve exercise adherence.

Future Studies Recommendation

Future studies should focus on refining and standardizing their methodology based on existing systematic reviews on this topic, report effect sizes, and whether their results achieve clinical significance. Moreover, future studies can explore longer-term effects of KT use on pain relief and exercise adherence, as well as whether self-taping is as effective as clinician taping. A review on TENS for pain control suggested that targeted use of TENS during movement or exercise may provide the most benefit. 18 It would be interesting to see whether KT functions similarly as TENS in this regard. Lastly, there are a few other factors that were not considered in this article that warrant further research: 1) How would individual variability in processing pain influence the effectiveness of KT?¹⁹ 2) Would long-term application of KT develop tolerance? If so, what are the strategies to prolong the analgesic effect from KT? 3) What are the optimal KT application parameters to work around skin habituation to the tape sensation? Before the research answers these questions, clinicians who wish to use KT as a pain management strategy should exercise clinical reasoning and consider patient response to individualize and optimize KT application for pain management.



Tiffany Tiu is a physiotherapy student, student researcher, and strength and conditioning coach at the University of Toronto. She is involved in the physiotherapy community as a co-chair at the CPA Pain Science Division Student Committee and a student representative at the OPA

Central Toronto District executive team. Her passion for better physiotherapy care and researcher-clinician collaboration led

her to develop Paincast (available on Spotify), the official podcast of the Pain Science Division, to facilitate conversations on pain and physiotherapy. Her research activities occur in the Biomechanics of Orthopaedic Sports Medicine Lab and she works with varsity athletes, general university students, and older adults as a strength coach.

References

 Rakel, B., & Barr, J. O. (2003). Physical modalities in chronic pain management. Nursing Clinics, 38(3), 477-494.

[2] Drouin, J. L., McAlpine, C. T., Primak, K. A., & Kissel, J. (2013). The effects of kinesiotape on athletic-based performance outcomes in healthy, active individuals: a literature synthesis. Journal of the Canadian Chiropractic Association, 57 (4), 356-365.

[3] Melzack, R. (1996). Gate control theory. Pain Forum, 5(2), 128-138. https://doi.org/10.1016/s1082-3174(96)80050-x

[4] Campolo, M., Babu, J., Dmochowska, K., Scariah, S., & Varughese, J. (2013). A comparison of two taping techniques (kinesio and Mcconnell) and their effect on anterior knee pain during functional activities. International Journal of Sports Physical Therapy. 8(2).

[5] Paoloni, M., Bernetti, A., Fratocchi, G., Mangone, M., Parrinello, L., Cooper, M. D. P., & Sesto, L. (2011). Kinesio Taping applied to lumbar muscles influences clinical and electromyographic characteristics in chronic low back pain patients. European Journal of Physical and Rehabilitation Medicine, 47(2), 8.

[6] Castro-Sánchez, A. M., Lara-Palomo, I. C., Matarán-Peñarrocha, G. A., Fernández-Sánchez, M., Sánchez-Labraca, N., & Arroyo-Morales, M. (2012). Kinesio Taping reduces disability and pain slightly in chronic non-specific low back pain: A randomised trial. Journal of Physiotherapy, 58(2), 89–95. https://doi.org/10.1016/S1836-9553(12)70088-7

[7] Lim, E. C. W., & Tay, M. G. X. (2015). Kinesio taping in musculoskeletal pain and disability that lasts for more than 4 weeks: is it time to peel off the tape and throw it out with the sweat? A systematic review with meta-analysis focused on pain and also methods of tape application. British journal of sports medicine. 49(24). 1558-1566.

[8] Devereaux, M., Velanoski, K. Q., Pennings, A., & Elmaraghy, A. (2016). Short-term effectiveness of precut kinesiology tape versus an NSAID as adjuvant treatment to exercise for subacromial impingement: A randomized controlled trial. Clin I Sport Med. 26(1), 9.

[9] Wilson, T., Carter, N., & Thomas, G. (2003). A multicenter, single-masked study of medial, neutral, and lateral patellar taping in individuals with patellofemoral pain syndrome. Journal of Orthopaedic & Sports Physical Therapy, 33(8), 437–448. https://doi.org/10.2519/ iospt.2003.33.8.437

[10] Thelen, M. D., Dauber, J. A., & Stoneman, P. D. (2008). The clinical efficacy of Kinesio Tape for shoulder pain: A randomized, double-blinded, clinical trial. Journal of Orthopaedic & Sports Physical Therapy, 38(7), 389–395. https://doi.org/10.2519/jospt.2008.2791

[11] Parreira, P. do C. S., Costa, L. da C. M., Takahashi, R., Junior, L. C. H., Junior, M. A. da L., Silva, T. M. da, & Costa, L. O. P. (2014). Kinesio Taping to generate skin convolutions is not better than sham taping for people with chronic non-specific low back pain: A randomised trial. Journal of Physiotherapy, 60(2), 90–96. https://doi.org/10.1016/j.jphys.2014.05.003

[12] Cho, H., Kim, E.-H., Kim, J., & Yoon, Y. W. (2015). Kinesio Taping improves pain, range of motion, and proprioception in older Patients with knee osteoarthritis: A randomized controlled trial. American Journal of Physical Medicine & Rehabilitation, 94(3), 192–200. <u>https://doi. org/10.1097/PHM.000000000000000148</u>

[13] Kase, K. (2003). Clinical therapeutic applications of the Kinesio taping method. Tokey,

Japan. [14] Lee, J. H. (2018). Effects of self taping therapy on knee pain and physical functions in older

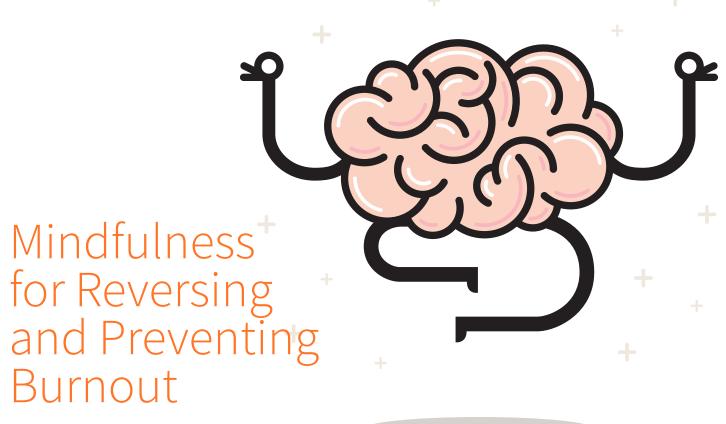
adult. The Journal of the Convergence on Culture Technology, 4(1), 33-39. [15] Kaya, E., Zinnuroglu, M., & Tugcu, I. (2011). Kinesio taping compared to physical therapy modalities for the treatment of shoulder impingement syndrome. Clinical Rheumatology, 30(2), 201–207. https://doi.org/10.1007/s10067-010-1475-6

[16] Mancini, F., Nash, T., Iannetti, G. D., & Haggard, P. (2014). Pain relief by touch: a quantitative approach. PAIN®, 155(3), 635-642.

[17] Rice, D., Nijs, J., Kosek, E., Wideman, T., Hasenbring, M. I., Koltyn, K., & Polli, A. (2019). Exercise-induced hypoalgesia in pain-free and chronic pain populations: state of the art and future directions. The Journal of Pain, 20(11), 1249-1266.

[18] Vance, C. G., Dailey, D. L., Rakel, B. A., & Sluka, K. A. (2014). Using TENS for pain control: the state of the evidence. Pain management, 4(3), 197-209.

[19] Conditioned Pain Modulation (CPM) and Temporal Summation of Pain (TSP) characterize how individuals process pain. Inefficient CPM and enhanced TSP could lead to a higher risk of acquiring pain. Inefficient CPM could influence the efficacy of KT. Impaired exercise-induced hypoalgesia response could also impact how well individuals respond to exercise therapy (see citation 17). The interaction between pain processing characteristics and KT application efficacy is yet to be researched. Readers interested in CPM and TSP can read Yarnitsky, D. (2015). Role of endogenous pain modulation in chronic pain mechanisms and treatment. Pain, 156, S24-S31.



Bonnie Klassen, BSc(OT), MSc

I had to do so much critical self-reflection before I could start to write on this topic! Even though I use mindfulness, train others to learn and practice it, and follow the research on mindfulness and meditation, I routinely take on too much work and volunteering. I then spend my weekends catching up and writing reports. It sounds like I am a candidate for burnout. Should I be concerned for my well-being and longevity, not for my reader? On the August long weekend, while everyone was away camping or on adventures, I was reading health research articles on burnout – oh the irony! Who am I to contribute to this newsletter on preventing burnout? Having said that, I will humbly attempt to describe how even the most burned out among us can find some renewed energy by focusing on purpose, without judgement, on our present moment experience. You do not need to take a lot of time to go on a mindfulness retreat or spend large tuition fees on courses, although some of you might choose to do this. The key to the puzzle is to bring the simple practice of mindfulness into your daily reality, even if that reality is less than perfect.

Burnout is a serious risk for people who work in emotionally demanding professions. There is strong evidence from a systematic and critical appraisal of interdisciplinary literature to support the efficacy of mindfulness practice to reduce burnout among health-care providers and educators, as it does for non-clinical populations (Luken & Sammons, 2016).

An example from the virtual Compassion in Therapy Summit 2021 was a nurse who worked in an ICU during the early stages of the COVID-19 pandemic. She described how, back in New York in March and April of 2020, it felt like battlefield medicine and not something she felt she had trained for. It was easy to feel overwhelmed with the workload and the lack of control, support, and recognition. To make matters worse, there were none of the usual social activities outside of work to put things back into balance. She used mindfulness to focus on simple necessary tasks at work, like paying intense attention to the sensations, thoughts, and feelings as she washed her hands or donned and doffed her personal protective equipment. There was a machine she used repeatedly that made her wait for a moment or two. Rather than get frustrated, she used that as a cue to take a deep breath, infused with kindness for herself. When comforting a patient, she would take a quiet moment and breathe in for herself, then exhale for the patient, using the breath to ground her to the present moment, even though that moment was challenging. After her shifts she would spend time grieving, then meditate so that she could let go of the cumulative stress, sleep, and then go back the next day. It's been a long time now, since those early days of the COVID-19 pandemic, that the healthcare providers on the front lines have had to keep pushing through. It's easy to imagine the appeal of negative coping strategies when the overwhelming conditions are relentless. We have all been tempted and slipped, some more than others. Again, me too.

What is mindfulness?

Mindfulness is based on clinical research on mindfulness-based cognitive therapy started by Jon Kabat-Zinn, Mark Williams, and others that has demonstrated decreased levels of anxiety, depression, irritability, and pain when mindfulness is regularly practiced (Williams & Penman, 2011). This is a form of mental training that includes observation, without judgement, of thoughts and feelings arising into consciousness, and learning to be compassionate with yourself.

How does mindfulness alter your experience?

Neuroimaging such as functional magnetic resonance imaging (fMRI) has increased our understanding of which areas of the brain are activated or deactivated with various forms of mindfulness meditation. It also shows differences for people who are untrained but have a measurable trait of being more "mindful." (Zeidan et al 2019). Brief mindfulness interventioavns affect the higher-level cognitive appraisal of potentially painful input, while extensive training is associated with deactivation of prefrontal and increased activation of somatosensory cortex (Zeidan et al, 2019). Mindfulness meditation does not activate endogenous opioids and the effect is distinct from placebo (Jinich-Diamant et al, 2020). More mental training makes more lasting changes to the brain (Goleman & Davidson, 2017).

Mitigating Potential Adverse Effects of Mindfulness

Adverse experiences with meditation are not common, but can include increased anxiety, depression, insomnia, intrusion of traumatic memories, panic attacks, seizures, dissociation, and decreased emotional regulation. Because of this, mindfulness training for learners and facilitators is important and it is recommended to start with shorter meditations while building skills. Facilitators should be trained in trauma sensitive/trauma informed techniques, such as offering choices and alternatives to customize experiences. Adverse effects seem more likely to happen during intensive meditation retreats.

Alexandra (Alex) Chisholm, BScPT, PgC Pain, is a Calgary-based physiotherapist with over 30 years of clinical experience. She specializes in the care of complex burn survivors, an area of practice acknowledged to have high burnout rates (Markiewitz, et.al, 2018). On top of that, she's a busy mom and volunteer. Alex incorporates mindfulness and meditation into her busy life to keep from being overwhelmed and burning out. She starts her day with a tea meditation. She focuses on the taste of the tea, the warmth in her mouth and down her throat as

she sips it, and the feeling and warmth of the mug. These simple things help focus the mind and can be inherently pleasurable. Something we tend to forget... to look after ourselves and enjoy the simple moments, allowing ourselves to experience pleasure.

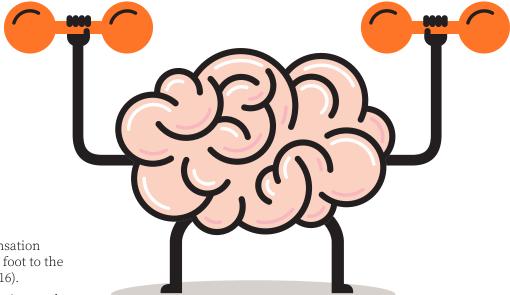
Alex uses most of her mindfulness strategies at work, rather than at home. During a conference she learned of the work of Krista Gregory, Kristen Neff, and Phoebe Long. One thing she found most helpful was a phrase she could repeat to herself when struggling during the day. She uses it when faced with a complex situation or when she feels stressed.

"Everyone is on their own journey. I am not the cause of this person's suffering nor is it entirely in my power to make it go away, even if I wish I could. Moments like this are difficult to bear. Yet I may still try to help if I can". (Gregory, K., 2020)

Alex has found that acknowledging what she's feeling in the moment and acknowledging how hard it is to see another suffering has made it easier to ground herself, helping her give compassionate care. In that moment, she is not just caring for her patient, because acknowledging how challenging these moments can be shows compassion for yourself. Another technique Alex uses is focusing on the soles of her feet and noticing weight shifts while walking from room to room or while standing at the dressing cart deciding what dressings to use on a burn. Much of our struggle is in our heads and focussing on the soles of our feet helps to get us out of our heads.

Alex shared some helpful words from the self-compassion teacher Kristin Neff. This can relate to both physical and mental pain. "Looking after people in pain is hard, and many run from seeing pain." Realizing that we are not running, even if we cannot "fix it all" helps alleviate the stress that comes from working with those in pain.

As an occupational therapist working with clients with complex chronic pain and mental health issues, training my mind to be focused on the present moment helps me to bring my full attention so I can listen to painful experiences with compassion and acceptance. Afterwards I also must stay grounded in my own experiences, so I do not get stuck ruminating on the suffering that exists in the world. As much as we seek to be healers and helpers, there are limits to what we can accomplish, and we sometimes face failure. At these times, we can use our skills to focus on feelings of gratitude or noticing small kindnesses to shift our minds toward a positive experience. This requires intention because our default is to attend to and monitor negative and fearful cues.



Some simple mindfulness practices you can try:

- Walk slowly and focus on the sensation of your weight shifting from one foot to the other (adapted from Altman, 2016).
- Walk or stand and focus on sensations: What can you see, hear, smell, taste, touch?
- Stand still and look at a tree, imagining that you, like the tree, have roots extending into the ground (adapted from Altman, 2016).
- Go slowly when taking a first (and second) sip of coffee or tea, first smell it, anticipate it, then taste it fully, and give appreciation for everything that had to occur so that you could enjoy this moment.
- Think of someone who loves and supports you from the past, present, or even the future, and take a moment to feel gratitude and to wish this same person well (adapted from Altman, 2016).
- Place your hand over your heart, or other soothing place, so that you can feel warmth and kindness for yourself and acknowledge that what you are experiencing is hard (Neff & Germer, 2018).
- Notice how these practices serve to interrupt your thoughts and feelings and give you some awareness of what is arising moment by moment into consciousness. You are beginning to learn about your own mind and tap into the resilience that has been there all along.
- This has been a brief introduction. To really benefit from mindfulness, you will need to learn more and practice regularly. There are many mindfulness resources and books, such as from Jon Kabat-Zinn. There are some meditation apps to make guided practice more convenient. Some are free, like "Healthy Minds" and "Calm for Sleep." There are apps that have some amount of free content that can be listened to over and over, like "Insight Timer" and "Headspace." Some have subscription fees after trying some free content, like "Calm" and "Waking Up."

Thank you to Alex Chisholm for sharing her experiences and suggestions for this article.



Bonnie Klassen is a clinical occupational therapist with 26 years of experience in a variety of settings, community, hospital-based, urban, and rural. She is also a mindfulness facilitator and is trained in medical acupuncture. She is employed with Alberta Health Services as an occu-

pational therapist in an interdisciplinary chronic pain clinic in Camrose, and she is the owner of Action Occupational Therapy Inc in Edmonton (website: www.actionot.ca).

References:

Altman, D. (2016). 101 Mindful Ways to Build Resilience. PESI Publishing and Media, PESI Inc. Eau Claire, WI, 166 pp.

Gregory, K. & Long Franko, P. (2020). "Self compassion practises for healthcare providers" (presentation), The Mindful Healthcare Summit.

Neff, K. & Germer, C. (2018). The Mindful Self-Compassion Workbook. Guilford Press, New York, 206 pp.

Goleman, D. & Davidson, R. (2017). Altered traits: Science reveals how meditation changes your mind, brain, and body. Avery.

Jinich-Diamant, A., Garland, E., Baumgartner, J., Gonzalez, N, Riegner, G., Birenbaum, J, Case, L. & Zeidan, F. (2020). Neurophysiological mechanisms supporting mindfulness meditation-based pain relief: an updated review. Current Pain and Headache Reports (2020) 24:56

Markiewitz, N., Cox, C., Krout, K., McColl, M., & Caffrey, J. (2018). Examining the Rates of Anxiety, Depression, and Burnout Among Providers at a Regional Burn Center. Journal of Burn Care & Research, Volume 40, Issue 1, January/February 2019: 39–43. https://doi.org/10.1093/jbcr/iry042. Abstract: https://academic.oup.com/jbcr/article-abstract/40/1/39/5056033

Smith, S. & Langen, W. (2020). A systematic review of mindfulness practices for improving outcomes in chronic low back pain. International Journal of Yoga, Sep-Dec: 13(3): 177-182. Williams, M. & Penman, D. (2011). Mindfulness: an 8-week plan for finding peace in a frantic world. Rodale Books

Zeidan, F. Baumgartner, J. & Coghill, R. (2019). The neural mechanisms of mindfulness-based pain relief: a functional magnetic resonance imaging-based review and primer. Pain Reports.