

CPA Expert Contributors

Lisa Carlesso, PT

Dr. Carlesso is an Assistant Professor in the School of Rehabilitation Science and a physiotherapist. She completed her physiotherapy training at the University of Toronto, her Master of Physical Therapy at Western University and her PhD at McMaster in Clinical Epidemiology. She then completed post-doctoral training at the Krembil Research Institute in Toronto and was a fellow at the Clinical Epidemiology Research Training Unit at Boston University.

Dr. Carlesso's research program is broadly focused on optimizing outcomes for people with chronic musculoskeletal disorders by 1. Understanding the complex mechanisms of acute and persistent pain through pain phenotyping, 2. Improving prognosis and treatment of chronic musculoskeletal disorders and 3. Knowledge translation of evidence to improve clinical practice. This includes evaluating strategies to improve entry-level pain education for physiotherapists.

Alex Chisholm, PT

With 33 of years of clinical experience as a physical therapist, primarily in acute care, Alex specializes in the care of complex burn survivors, with special interest and education in pain management. Alex has taught and lectured on Pain science, Pain management and medical hypnosis locally, nationally and internationally, and is a certified comfort talk trainer with Dr Elvira Lang. Alex is part of the working group that developed the free online chronic pain toolkit by Physiotherapy Alberta.

Geoffrey Bostick, PT PhD

Geoffrey Bostick currently teaches about pain management in the MScPT program at the University of Alberta. His research is in the field of pain education and assessing pain in marginalized groups. He also practices about 1 day/week offering chronic pain physiotherapy services.

Janet Holly, PT, MSc Chair, CPA Pain Science Division

Janet Holly has 28 years in the management of complex pain (including specialized populations such as mTBI and pain; PTSD and pain) at the Ottawa Hospital. As a Senior Physiotherapist. Her research interests as a clinician researcher include the use of virtual reality as a treatment modality for complex regional pain syndrome as well as using machine learning to investigate sympathetic activation in PTSD, chronic pain and mTBI. She is a Clinical Specialist in Pain Science who informally mentors' clinicians within her LIHN on complex pain as well as a clinician supervisor for physiotherapy student. She teaches nationally on complex pain. A recent completed project was her role as part of the Alberta Physiotherapy Association and College Chronic Pain Toolkit.

Capt. Anne-Marie Lambert, B.Sc., PT.

Anne-Marie Lambert physiotherapy officer in the Canadian Army Forces. I have been practising since 2006 and graduated with a B.Sc from McGill University. I have worked at 4 different bases in Ontario, all with quite a bit of difference in the population. Young army guys in Petawawa in the Afghanistan era, young officer cadets in Kingston, older/

stressed population in Ottawa and finally high-performance specialized operators in Trenton.

Kyle Vader, PT, BHSc (Hons), MScPT

Kyle Vader is a physiotherapist at Kingston Health Sciences Centre and PhD candidate in Rehabilitation Science under the supervision of Dr. Jordan Miller at Queen's University in Kingston, Ontario. Kyle is also a recent graduate of the Transdisciplinary Understanding and Training on Research-Primary Health Care (TUTOR-PHC) Program through Western University. Kyle's research focuses on pain, rehabilitation, primary healthcare, and knowledge translation.

Timothy Wideman, B.Sc., PT, Assistant professor

Timothy Wideman is a licensed physiotherapist and Associate Professor at McGill University. My research focuses on advancing personalized care for people living with pain. I teach entry-level physiotherapy (PT students how to manage chronic and complex pain conditions and lead a national knowledge translation research project that aims to improve PT pain education across the country.

A. DEMOGRAPHICS (section to be completed by CPA at time of submission)

- Gender
- Age range
- Province/Territory
- Region (e.g. rural vs urban)
- Identify as first nation/inuit/metis
- Identify as specific cultural group
- CAF or RCMP
- Income
- Group description
 - Responding on behalf of a group/org/association
- Health care provider occupation
 - N/A
- Group/Org type
 - Non-Governmental organization/nonprofit

PART B – BARRIERS TO ADDRESSING PAIN

Reminder: All questions are optional; please only respond to the extent you are comfortable and be mindful not to disclose any personal information about an identifiable 3rd party (e.g. your physician, a family member).

Pain is an important health issue. When pain persists, it can affect all aspects of our lives, including work, family relationships, and community participation.

The Task Force would like to hear about challenges and barriers from a broad range of viewpoints. We want to know what you think is preventing people from getting the care and support they need. When you give your input, please think broadly across the four themes: access to timely and appropriate pain care; awareness, education, and specialized training; pain research and related infrastructure; and, population health surveillance and health system quality improvement.

Consider what is most important to you.

12. What challenges and barriers to understanding, preventing, or managing pain exist in your community and in Canada?

Despite strong evidence that chronic pain is most effectively managed using non-pharmacological strategies, such as activity, exercise and mental health support, the access to these therapies remains a significant barrier for many Canadians. Thus, family physicians are limited in how they can support the management of chronic pain with pharmacological and interventional therapies being the treatments that are funded, while funding for healthcare providers that support physical and mental health is limited, and in some cases absent. This also speaks to the poor transitions of care from hospital to community and the challenges Canadians have navigating how to get appropriate care in the community.

Significant barriers exist when it comes to equitable access for patients with chronic pain to see physiotherapists – as such, we need health policy that considers this and looks to improve access for patients who need it. It is important to acknowledge that pain management is not a solo or single professions' undertaking – we need physiotherapists to be part of comprehensive chronic pain management – that includes pharmacology, psychological, and physical interventions as needed. We are 'strong together' when it comes to effective chronic pain management.

Further, access to non-pharmacological primary care pain management is a major problem in Canada. Specifically, increased access to activity-based rehabilitation (including physiotherapy) and mental health services are desperately needed across the country. Awareness of non-pharmacological options to pain management is not optimal amongst physicians and the public, and with improved awareness, access, and extended health benefit (EHB) programs should be expanded and aligned to include non-pharmacological treatment options.

Pain management in marginalized groups is sub-optimal. Healthcare providers continue to provide care using 'western principles' to Indigenous and other Culturally and Linguistically Diverse (CALD) Communities.

Healthcare training programs, with some exceptions, generally do not prioritize pain management in education. Healthcare trainees need more effective training to meet the complex needs of a diverse and aging population, and there is a lack of current pain science

knowledge among care providers. There is a focus on the pathoanatomical model of care and use of 'nocebo' language by healthcare professionals. Further, there is a lack of knowledge regarding the power of the language surrounding pain and its impact on patients.

There needs to be more recognition of the reciprocal link between physical and mental health - much of the morbidity related to pain is influenced by mental health problems and mental health is adversely impacted by pain. While most would agree this is the case, the way healthcare is delivered and funded is fragmented and functionally does not acknowledge the interconnectedness of physical and mental health. Often clinics treat each patient as a number i.e. the same treatment program is offered for each patient

There is too much emphasis on specialist care; we do not need more specialists to effectively manage complex pain. People need better access to care early on to prevent progressing to the point where they have seen multiple healthcare providers and specialists over a protracted period. There are massive wait lists to access specialized services once pain has reached the point of being chronic. The rush to discharge patients from acute care after surgery often means they are discharged on narcotics. A lack of screening tools such as an opioid manager in acute care settings, and the lack of utilization of pharmacists as part of both inpatient and outpatient care teams are also challenges/barriers to effectively addressing pain.

Understanding Pain:

There continues to be a strong medicalization of pain in the sense that many front-line providers (from multiple professions and specialties) are continuing to excessively search for the tissue or disease cause within clear central sensitization cases of pain who have had prior proper medical work up to rule this out. The lack of screening for other causes that may be exacerbating the central pain mechanism or good biopsychosocial history taking to immediately seek an underlying cause to worsening pain derails any ongoing treatment which is targeting self-management as the individual is psychologically pulled back into "there is something wrong that someone missed" frame of mind. This brings the individual back to the start of a new grieving cycle. Weeks to months of clinical therapy (be it psychological, physiotherapy, or occupational therapy) can be disrupted leading the clinician or team to start over from the beginning. Not only is this not helpful for the individual and possibly harmful from the aspect of mental health but it wastes significant health care resources. This is particularly problematic in conditions such as complex regional pain syndrome whereby there is still a strong belief among orthopaedic surgeons in Canada that if a plate/screw is removed or if a fracture is re-set or fused, then the complex regional pain syndrome will go away. This is not in keeping with the evidence or practice guidelines (See resource produced by the UK Royal College of Physicians, *Complex Regional pain syndrome in adults*, 2nd edition, 2018.)

LINK <https://www.rcplondon.ac.uk/guidelines-policy/complex-regional-pain-syndrome-adults>

which recommend avoiding surgery unless absolutely necessary as there is a significant risk of worsening the condition. Surgeries/procedures also occur to fix tissues in cases of obvious central mechanisms of pain. This continued search in the presence of past medical work up for tissue damage or disease indicates a lack of evidence-based knowledge across disciplines and specializations of the fundamentals of persistent pain with regards to immunology and neurophysiology. It may be representative of the clinicians inability to accept that not everything can be "fixed" and a sense of helplessness in the face of a patient that needs to be referred to a clinician with a depth of expertise in the management of persistent pain.

Basic knowledge about identification of type of pain (differentiation between neuropathic, nociceptive and neuroplastic or now called 'nociplastic' – understood as pain that arises from altered nociception despite no clear evidence of tissue damage or disease, (Aydede et al, 2018)) and knowledge of evidence-based therapy (not all need to be proficient, but they need to have the knowledge base of what constitutes evidence-based therapy in order to make appropriate referrals) is essential for all health care providers. Targeting students only is not always successful as new graduates are influenced by their practice environment and best practice principles are dropped. As a clinician working in an area of specialization, patients report past treatment plans by other providers. Although, an experienced clinician realizes there are sometimes omissions, it is not unusual to see non-evidence-based treatment plans from newer graduates who have received modern evidence-based training in the management of persistent pain.

Clinicians need to make peace with the concept that we (as healthcare providers) do not cure someone of persistent pain. Too many in health care have a strong desire to help and cure patients which is admirable but incongruent with the science around persistent pain. With this diagnosis like many others the management plan needs to be driven by the patient who has been armed with the appropriate resources. This will require a culture shift within health care that we are coaches and are not providing cures.

Although less common, there is still a need in some areas to remove the stigma of chronic pain among health professionals (Werner et al 2003). There are still health care professionals who believe someone is too tough to develop persistent pain and it is not addressed in the early days of development or contrarily someone just does not have the mental fortitude to tough it out.

Preventing:

Iatrogenic Harm: There is still an excessive ordering of imaging, although in recent years the trend is on the decline. What is on the increase is the sharing of detailed results on electronic Mycharts without explanation of the percentages of pain-free individuals with the same findings (Brinjikji et al., 2015; Docking et al 2015; Guermazi et al 2012; Register et al, 2012; Wiesel et al, 2012) The actual images themselves are frequently shared at follow up medical appointments. Patients commonly load these up to their camera phones and some even use the images as wallpaper backgrounds on their phones. This only encodes the findings at the cortical level and increases the upregulation of pain. This need to share minute *detailed* findings of arthrokinematics assessments, functional movement assessments or imaging is not necessary to explain a needed treatment plan to a patient to obtain consent and has the potential to cause iatrogenic harm leading to persistent pain (Lin et al 2013). Clinicians from all backgrounds need to be educated and cognizant of the power of words. Patients latch onto these words/images and they become part of their pain experience and can be a barrier to recovery.

We need to screen better pre-operatively for all risk factors (comorbidities, psychological, social supports, test for temporal summation pre-operatively and assess for persistent pain at other sites) for persistent pain and start management strategies pre-operatively and carry them through post-operatively. (Rajamaki et al., 2015; Lewis et al, 2015; Rice et al, 2018). We also need to set realistic goals around reduction of pain pre-operatively for knee replacement and hip replacements, so patients do not have false expectations. Pre-operative consultations with physiotherapists can screen for psychosocial flags to have them addressed as well as address

maximizing strength, endurance and cardiorespiratory capacity pre-operatively. Testing for temporal summation is part of a physiotherapist's assessment skillset.

Prevention should also include improving mental health resources, as many patients with persistent pain have comorbid mental health diagnoses that sometimes are managed by medications, but few have access to publicly funded psychology for counselling and self management strategies particularly around anxiety. Anxiety has been found to be a risk factor for the development of post-operative pain (Shug et al., 2017). Providing publicly funded access is one thing but removing the stigma (both patients and health care clinicians) about asking for help for a mental health condition will require a culture shift.

Managing:

Proper screening of depression, anxiety, past significant trauma, PTSD and sleep disorders is still uncommonly done, and these will be barriers to treatment and in the case of PTSD set up a mutual maintenance of one another (Asmundson, 2002).

We need to ensure we treat the patient and not the imaging. Too often patients are sent for surgery for what is considered normal aging changes. (Brinjikji et al., 2015; Docking et al 2015; Guermazi et al 2012; Register et al, 2012; Wiesel et al, 2012, Schwartzberg et al., 2016; Girish et al., 2011). The imaging must match clinical *objective* test findings not just pain location which has poor diagnostic validity.

Patients need to have early access (physical and fiscal) to evidence based physiotherapy services and should not have to make decisions between physiotherapy or rent. Access to publicly funded physiotherapy has become more and more limited in recent years due to funding cutbacks. Too often patients are offered increasing amounts of pharmacological management from general practitioners, interventional medicine, or surgery as this is all that is available under the public purse or is quickly accessible without need to pay privately for physiotherapy. They then will get access post-operatively for surgery as well as frequently paid time off work to recover, versus pay for themselves (out of pocket) physiotherapy and stressful processes for time off work or modified work whereby they could focus solely on rehabilitation.

Too often patients are sent straight to surgeons when a short course of therapy does not resolve an issue. There is an impatience in the health care system to see results immediately. Recovery from injury and persistent pain takes time. Admittedly physiotherapists are frequently waiting for other referrals to other team members which they identified the need for within their assessments and yet the clock keeps ticking from the date of the first physiotherapy appointment versus starting at the date the full collaborative team is in place to address the person and their context of pain. Despite insurers all agreeing certain factors are a barrier to treatment, timelines run from initial contact. Alternatively, there needs to be an opportunity to send/refer complex or slow responders to **specialized physiotherapy services** for the treatment of persistent pain before abandoning physiotherapy early on. We do not expect general practitioners to manage complex or slow to respond conditions why do we expect generalist physiotherapists to have expert skills in all domains of physiotherapy practice (neurology (spinal cord, TBI, stroke MS, etc.), cardiorespiratory, respiratory, amputee, burns, pain etc.) This is why board certified physiotherapy specialists exist.

Greater publicly funded access to physiotherapy without long waiting lists is a basic need of Canadian health care. Patients with persistent pain tend to cascade on wait lists and what might

have been managed solely by physiotherapy may now need an extended therapy team to address the various factors that have emerged in the cascade of waiting (social worker because they lost their job and are financially insecure, psychologist as they have developed depression, occupational therapist as fear has incapacitated their ability to perform ADLs or IADLs).

Access to a variety of treatment formats is a necessity. Group chronic pain management programs are effective but frequently require daily attendance which many are unable to commit. People with social anxiety do not feel comfortable in group settings. Those with language barriers get lost within the group. Those with comorbid mental health diagnoses such as personality disorders are frequently screened out as they may be seen to be possibly disruptive or a bad fit in group dynamics. Those with severe PTSD may not benefit as the co-maintenance of the two conditions is not being dealt with in tandem. (Asmundson 2002; Liedl 2010). There is still a need for accessibility of 1:1 physiotherapy service or 1:1 team-based services to deal with pain to address some of these issues. Individualized services are frequently required for specialty populations as the treatment knowledge needs are frequently a mix of specialty rehabilitation and pain management skills (spinal cord injury and persistent pain, the aging person with cerebral palsy or muscular dystrophy and persistent pain, Ehlers Danlos syndrome, ABI and persistent pain, etc.)

Rural and remote populations often have less access to specialized pain teams. We need greater telehealth resources so that patients in rural and remote settings can access clinicians with expertise in pain from all disciplines, not just medical. Treatment could be done from a distance through telehealth but more optimally when there is a clinician locally who wishes to learn to co-treat for one or two patients to transfer the knowledge locally. There is a need for sponsored physiotherapy pain courses in remote regions. The cost to reach remote regions with limited physiotherapy services means that face to face courses that allow for discussion beyond pre-set curriculum as well as networking for contacts for difficult cases do not occur as the instructor will take a loss. Project Echo in Ontario is excellent at bringing physicians to areas in need of up to date assessment and treatment skills but less-so for physiotherapy. Therapists in remote locations have a finite education budget which needs to be spread across many areas of practice.

Access to programs outside of the traditional workday is required for those with childcare responsibilities, or those who are employed. Making someone take the risk of losing their job for treatment is counter intuitive.

There is a need to offer less traditional methods of assessment and treatment for specific populations to address their specific needs – Indigenous populations, Military and veterans, genocide victims, etc.

We need to consider social determinants of health across Canada and address them where disparity exists. This can be optimized by leveraging allied health as there are vast numbers of allied health practitioners, including physiotherapists, throughout the country who are low cost health care practitioners who have been trained to assess and address the impact of disparity on treatment outcomes.

Conservative pain management strategies offered by physiotherapists are under utilized and are equally effective as many pharmacologic or surgical options with fewer risks and adverse outcomes. A paradigm-shift in patient thinking (and its reinforcement by the medical community) that they can only be fixed or managed by the latter is needed. While physiotherapists can help

with that messaging, it must be unified across health professionals, particularly physicians (and changed starting during medical education). Management options should focus on optimizing restoration of the individual (self, function, social etc.) and less on known, ineffective ways to rid of pain, wasting healthcare dollars. Physiotherapists have access to postgraduate advanced training in evidence based conservative management of pain. The Canadian Physiotherapy Association (CPA) has a Pain Science specialization program, mentorship programs and pain science to practice groups; the latter two offered by Pain Science Division (PSD). The PSD has a professional pain science development tool for clinicians to assess their knowledge against the International Association for the Study of Pain (IASP) criteria and resources to improve gaps.

We need low cost or no cost group community programs to manage osteoarthritis focussed on exercise and good health practices. These need to be staffed by regulated health practitioners with training in disease management and exercise due to the comorbidities found in these same populations. These programs should not only be targeting those referred by physicians but should be openly available by self referral by aging Canadians. Physiotherapists are ideally suited as a low-cost practitioner with the appropriate clinical knowledge and skills to run these programs safely to obtain maximal outcomes. A suitable model to explore are the GLA:D programs in Denmark but does not need to be this program specifically.

When considering specific groups, barriers and challenges in the area of practice serving the military population are also described:

Managing: If an individual is injured, there is a short timeline to get back to full duty (employability)

Understanding: For many military members, pain means an injury has occurred, and if pain persists, then there must be something wrong – meaning the individual thinks that they require a test and that the test will explain the condition. With easy access to a test or a specialist, this leads to over medicalization, over prescription and easy access to low or no cost prescription pain medication.

Preventing: Understanding pain in the military context means appreciating the full psychosocial profile inherent with military service; service persons are exposed to stress from frequent moving/relocation, deployments and many members have had adverse childhood experiences (ACE) and/or exposures to previous trauma.

From a research and knowledge sharing perspective, there is an overall need for translating research findings into clinical practice. In general, there is very little infrastructure in Canada that is specifically designed to support and encourage knowledge translation (KT) research and initiatives. Most of the emphasis within Canadian pain research is in knowledge generation. However, without a corresponding investment in translating these findings to practice, this is very little potential that our research will improve the lives of Canadians living with pain.

Specifically, there needs to be an increased focus on how we integrate current knowledge from pain management research within the entry-level training of future clinicians. Improving entry-level pain education holds the potential for creating a new generation of clinicians that are better prepared to meet the needs of Canadians suffering with pain. Training that focuses on helping future clinicians understand and address the lived experience of pain is particularly needed. To ensure the highest potential for meaningful change, this KT work needs to be done in

partnership with people living with pain, as well as relevant stakeholders. This will help ensure that clinicians are better prepared too.

13. What needs to be done to respond to these challenges and barriers?

Access

All Canadians need access to physical and mental health services early after illness or injury. For example, someone discharged from the hospital with ongoing pain and psychological distress should be able to access counselling, especially if they do not have private insurance. People with pain and mobility problems should have early and affordable access to physiotherapy and mental health services, especially if they have private insurance.

Access to specialized physiotherapists for (d/c) discharge from acute care for surgical patients, and publicly funded pain management with checks in place to ensure evidence-based care is offered. Note that this would be suitable for those demonstrating challenging and complex pain presentations as not all who are post-op with persistent pain require physiotherapy. Benchmarks with timelines (in the current model) will not work however due to the variety of pain presentations and barriers that need to be addressed.

Engagement

Canada needs to better engage leaders of Indigenous and CALD communities to better support health care programming and policy decisions around pain management in these groups.

National Leadership

A national strategy for pain should highlight the need for improved pain education in all healthcare training programs. This would give program administrators, accreditors, and professional colleges a unified message to encourage a greater priority for graduating trainees with greater competency in managing pain

Education

Improved education regarding pain for GPs in all specialties, for allied health and for all health professions at the early education stages (starting in undergraduate, for health professions training in universities and colleges, and in medical school). Education of physicians by allied health, alongside better connections with clinicians and researchers into pain would also be of benefit, so that GPs can see multidisciplinary team as part of pain care, not just pharmaceuticals. Entry-level training in pain management needs to be improved in terms of overall time and content. There also needs to be an increased focus on helping future clinicians understand and address the lived experience of pain (not only the mechanisms and symptoms associated with pain). There needs to be increased integration of people who are living with pain within entry-level training programs.

Mandatory competency training across all disciplines of care should be done addressing the management, understanding and prevention of pain. One model is the Alberta Physiotherapy College and Association Chronic Pain Toolkit and subsequent role out plan. Although not mandatory it provided resources online for remote clinicians, follow up webinars and invited speakers at their yearly conference. To make it mandatory it would likely have to be promoted /enforced by the various discipline regulators. All disciplines should consider the pain competencies outlined by the International Association for the Study of Pain for specific

disciplines. The physiotherapy competencies are being integrated into Physiotherapy programs across Canada

Improved communication among health care practitioners is also needed. With the implementation of electronic charts information is accessible to some clinicians however busy clinicians, particularly specialists in other domains, rarely scan through to access information with regards to the pain management plan, its progress as well as present barriers to recovery. Separate pain sections focussed on quality of life and self-management plans versus quantification of pain scores would assist all clinicians in future admissions or during “pain crises” to be able to provide treatment within congruent goals and style of the pain management plan.

From a military perspective, improved education about what pain and injury should be incorporated at the level of early stage recruitment. Coping strategies to support and educate recruits early in their career on what happens when injury occurs – before it occurs - and how to manage stress, plan for work-life balance and implement an overall healthy lifestyle are crucial. Part of this education should also focus on identify support for those with persistent pain and strategies to work around options for employability, so that not as much stress is placed on a timeline for recovery and so that meaningful employment can be obtained.

Screening/Other

- Pre-op screening for risk factors for chronic pain post-op
- Adequate funding in community for allied health treatment for those with complex pain
- Utilization of non-pharmacological techniques for pain (i.e. Book: patient sedation without medication by Dr. Elvira Lang, Harvard University)
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Physiotherapy as part of the interdisciplinary pain team

The number of positions available for specialized physiotherapists among specialty pain teams and within complex outpatient rehabilitation teams should be expanded (as these manage persistent pain as a larger percentage of their caseloads as well). Physiotherapists exist here, but whereas there are numerous physicians to provide interventional treatments there are one or two full time equivalents for physiotherapy. The evidence points out exercise, education, pacing and planning skill development, and cognitive behavioural activity as the most successful management plans but clinics are not staffed to reflect the evidence. Improved funding will also allow for the appropriate time to deal with barriers, address health literacy and to manage the long wait lists.

Integrating physiotherapists into primary care teams in Canada is one potential strategy to improve equitable access to physiotherapy services and also ticks the box of having physiotherapy part of interprofessional and team-based approaches. Although physiotherapists are integrated in almost all tertiary care chronic pain clinics in Canada, access to these specialized services can be challenging due to lengthy wait lists and geographical inequities. As such, primary care is arguably the best spot to make it such that physiotherapy care can be more accessible for the greatest number of Canadians – the benefit is that this is publicly funded care so cost is not a barrier to care.

Further, the creation of physiotherapy pain educators or clinical experts within hospitals to be able to provide consultations for patients in the acute care setting not following expected recovery paths and appear to be at risk for persistent pain. Acute care pain programs (Acute Pain Services- anesthesiology) exist that address pharmacology for atypical pain in acute hospital admissions but not non-pharmaceutical treatments. Acute Pain Services can be requested to assist with atypical pain but no other on request service exists. Nursing has a long history of nurse educators and expert consultants (i.e. wound care) who provide consultative services when requested and this would be a good model to follow to create a physiotherapy model of care within acute care hospitals across Canada. This physiotherapist could assess and provide advice to the unit physiotherapist, unit team as well as the patient and recommend community follow up plans on discharge to address persisting pain but more importantly to focus on the restoration of quality of life.

Changing the Conversation around Pain

We need to leverage recovered individuals who are successfully enjoying good quality of life in a marketing campaign, demonstrating that pain is not something to be feared but rather can be managed the same as diabetes or chronic lung disease. Using well known individuals would only enhance the success of the culture shift. This leveraging should be done through social media, advertising on mainstream TV during popular shows or sports events, through online forums and through associations that are actively advocating for improved pain management for Canadians, such as the Canadian Physiotherapy Association, etc.

Research and Knowledge Translation

A dedicated portion of pain-related research funding should be dedicated to knowledge translation (KT) initiatives that are advanced in partnership with people who are living with pain. New models for providing interprofessional primary care pain management need to be developed. This care and new knowledge needs to be integrated within the other existing family medicine and specialized pain management centres.

Part C – ways to better understand, prevent and manage pain

Reminder: All questions are optional; please only respond to the extent you are comfortable and be mindful not to disclose any personal information about an identifiable 3rd party (e.g. your physician, a family member).

After reviewing the current state of pain in Canada we believe that there are many successes to build on. In pockets across the country, innovative clinical models, education, support programs, and research already exist. We would like to know more about what is already working well or showing promise of improving the health and wellbeing of people with pain.

We also hope to understand why some practices are successful, so we can begin to explore their use in new sites and settings.

We encourage you to share any experience and perspectives gained within Canada and elsewhere if this applies.

14. What is working to address pain in your community and in Canada? Please provide specific examples of practices and/or activities.

Ontario has done a very good job in creating multidisciplinary primary care teams that enable people living in pain to access the appropriate healthcare provider to meet their unique needs. These care teams explicitly use co-practice models with different healthcare providers working shoulder to shoulder. Alberta, on the other hand, does not seem to have the same multi- or interdisciplinary infrastructure.

Changing public and clinician beliefs around opioid efficacy and diagnostic imaging have been successful (e.g. Choosing Wisely). However, the consequence is that it is not necessarily changing the health of Canadians, because there are barriers (e.g. funding) to access care for physical and mental health.

There have been several exciting grassroots, stakeholder-led, knowledge translation initiatives that appear to have good potential for meaningful change. Pain BC is an excellent example of this. There should be a national version of this initiative that aims to bring together people who are living with pain with both clinicians and researchers. I think our national Pain Education in Physiotherapy project has already started to have a positive impact on how physiotherapists are trained to manage pain across the country. I believe this project has very strong potential for improving how PT pain education is regulated across the country, which would effectively raise the bar for how we prepare our future clinicians to manage pain. This project also has potential to serve as a valuable template for corresponding training programs in other health professions, particularly for occupational therapists.

Examples of community efforts to address pain include, but are not limited to:

- University of Alberta Pain Certificate in Pain Management
- Various nationwide communities of practice focused on pain management

- Pain BC
- Pain Research Forum
- Canadian Physiotherapy Association (CPA) Pain Science Division
- Hypnosis use by allied health in acute care, complex burns, lower pain medications, lower staff stress
- Education of nursing by allied health re: Pain
- More education of physio in techniques such as Acceptance and Commitment Therapy (ACT) and Cognitive Behavioural Therapies
- Telephone pain advice line, such as Pain Support Line BC

Clinical care:

- A variety of care models to meet the context of the individual patient.
- Given COVID-19, virtual care is being provided and providing future templates for conducting virtual education sessions and classes as well as assessment and treatment for those that cannot attend traditional therapy models of care. This also presents an opportunity to further leverage the role of physiotherapy assistants (PTAs) in supporting Canadians who live with pain.
- Allowing for longer appointment times: not rushing patient out of the office, typically 40-60 min
- Set specific patient-centered goals, incorporate exercises when able, quantify some movement they perform in their program to show progress.
- Journaling
- Using stories, using videos, books

Public and private pain services

Public: The Ottawa Hospital

- 1:1 outpatient physiotherapy services to address complex presentation of persistent pain (exercise, pacing planning, graded motor imagery, sensory integration, hydrotherapy, cardio, QiGong, life activity graded based on patient's individual context, specific rehabilitation focussed therapy for comorbidities, virtual reality treatment for specific complex pain presentations based on neurophysiological principles and tailored from the individual assessment- access to psychology, social work as required -
- Day Hospital multidisciplinary group service – 4-week 5/7 days all day
- Interventional Pain Clinic with a physiotherapist offering access to a menu of group therapies (yoga, hydrotherapy, home exercise program, QiGong Graded motor imagery) for short duration
- The ISAEC program for acute spinal pain
- The Royal Ottawa Mental Health support program for chronic pain patients
- The Children's Hospital Pain Multidisciplinary Pain Team
- The Bruyere Palliative Care Team – to address pain in palliative care
- Living Healthy Champlain, a 6-week community workshop for Chronic Pain

Private: Numerous Private physiotherapy clinics are currently addressing persistent pain, as well as occupational therapy clinics, and a few private pain programs run by interventional physicians

Research:

- Limited in Ottawa community outside of interventional medicine
- Ottawa- Immersive Virtual reality as a treatment medium for Complex Regional Pain Syndrome (CRPS)- Physiotherapy Clinician Researcher led initiative to explore alternative treatments to address spatial dysfunctions and pseudo neglect of CRPS.
- National: numerous physiotherapy researcher projects throughout Canada on Pain Research: below is just a small sample from across Canada
 - Dr. Dave Walton University of Western Ontario- Mechanisms of traumatic pain and disability, prognosis and longitudinal modelling in acute musculoskeletal trauma
 - Dr. Lisa Carlesso – McMaster University- pain phenotypes in knee osteoarthritis and injured workers with chronic low back pain
 - Dr. Katherine Harman- Dalhousie University-study of pain from prevention of chronicity to the management of chronic pain, impact of therapeutic alliance on outcomes
 - Dr Maxi Miciak- University of Alberta- impact on therapeutic relationship on outcomes, patient centered care
 - Dr Timothy Wideman- McGill University- Understanding and managing disability associated with musculoskeletal pain
 - Dr. Geoff Bostick-University of Alberta-examining pain beliefs and expectations on relief of future pain, persistent pain post knee replacement from a peripheral nerve perspective, patient understanding of persistent pain particularly women's perspective on pain
 - Dr. Jordan Miller- Developing and testing interventions for people living with acute to chronic pain; improving primary care management for people with musculoskeletal conditions and pain, knowledge translation to facilitate evidence-based management of musculoskeletal conditions and pain
 - Dr Susan Tupper; University of Saskatchewan, Pediatric pain
 - Dr. Linda McLean; University of Ottawa; pelvic pain
 - Kyle Vader: Queen's University, PT, BHSc (Hons), MScPT, PhD candidate in rehabilitation sciences

Education and Mentorship:

- Ottawa: informal mentorship of physiotherapists both civilian (acute, rehabilitation and outpatient based, WSIB, and military therapists for the identification of persistent pain
- Ontario: Numerous presentations to physicians, nurses and other disciplines on the role of physiotherapists in the identification and management of persistent pain as well as tools that are useful to any discipline
- Local small group course in underserved area of New Liskeard created a group of very skilled physiotherapists and a nurse practitioner in the assessment and management of pain disorders. Conducted by a physiotherapist specialist in pain sciences
- National: Pain Science Division Mentorship Program, Pain Science to Practice groups as well as online resources to ensure physiotherapists are armed with the latest evidence-based care.
- National Canadian Physiotherapy Association Specialty program to graduate pain specialists for complex cases.

- CPA Pain Science Division Professional Development Assessment Tool For Pain
- CPA Pain Science Division Knowledge Translation Project to identify factors for uptake of the Pain Professional Development Assessment tool
- National- numerous physiotherapists holding evidence-based courses on the management of persistent pain and the management of complex pain conditions- online and in person
- The Canadian Pain Society conference is welcoming to all professions in their mandate to improve care for Canadians

15. What is it about these practices/activities that makes them successful?

Most people with disabling pain require support in multiple domains of health (e.g. medical, physical, and mental). Increasing access to care provides the avenues to access the care early on, mitigating the need for expensive specialist care. Creating environments that facilitate interprofessional collaboration further facilitates this.

The government and organizations such as the Alberta Medical Association and others, such as ECHO Ontario's expansion to include more allied health, and Pain BC, have shown that policy decisions and education can meaningfully change practice (reducing inappropriate opiate prescriptions and diagnostic imaging referrals). These successes can be repeated, and the savings reinvested to improve access to all forms of care.

They are a variety of evidence-based practices/activities that have demonstrated success, from:

- front line clinical care (public, private, virtual, group, and 1:1); not a one size fits all treatment strategy
- physiotherapy innovation in clinical care (virtual reality with specialty population of PTSD and persistent pain; complex regional pain syndrome (CRPS), mild traumatic brain injury (mTBI) and pain)
- knowledge translation of evidence-based practice in many formats; (1:1, virtual, group based)
- researchers in the physiotherapy field constantly pushing the envelope for improved conservative management of persistent pain as well as understanding the impact of therapeutic relationship and best formats for knowledge translation of pain science care principles.
- More time with patients = empathy and compassion= feeling understood
- The importance of sharing lived experiences and stories: people relate to stories and again feel like they are not alone
- SMART Goal-setting: if achievable, goals will make sticking to the plan easier- a goal without a plan is a wish.
- journaling- people forget, helps with maintaining accountability
- meaningful integration and collaboration across people living with pain, clinicians and researchers.
- Improved/increased knowledge of healthcare practitioners
- Interprofessional collaboration and communication, the right practitioner at the right time (e.g. musculoskeletal AND comprehensive pain assessment completed by PT)

Part D – INFORMING CANADA’S APPROACH TO PAIN

Reminder: All questions are optional; please only respond to questions to the extent you are comfortable and be mindful not to disclose any personal information about an identifiable 3rd party (e.g. your physician, a family member).

Canada is a world leader in pain research. Yet, there are many aspects of pain that we do not understand. More work is needed to apply knowledge from pain research in education, policymaking, clinical practice and elements of everyday life.

16. What should be the 3 top priorities for research in pain from your point of view?

1. Knowledge Translation of present research: Integration of present research knowledge into practice on the front lines as well as creative applications for accessibility of that research to meet the needs of Canadians. There is no point conducting more research if it is minimally integrated into front line care. We may not have “the” answer to persistent pain but we do have evidence based treatments that are not being consistently applied or patients have little accessibility to the treatments due to remote locations, health language literacy issues or structure of programs (need to attend daily and the person has a job without large amounts of medical leave). KT efforts should also target the variation in language of pain according to culture/background/work environment and how to best reach all of Canada with up to date information about pain and how to manage it.
2. Studies that address barriers to accessing care (including mental health and physiotherapy), including how to change the public perception of chronic low back pain to evidence-based treatments based on the biopsychosocial spiritual frameworks and modern pain neurophysiology.
3. Front line clinician driven research to meet the needs of challenging populations who are frequently those that do not fit the statistical responders of present research studies. This means inclusion of patient populations that are frequently excluded as they are “messy” populations (addictions, specific communities (indigenous, military with PTSD, morale injury, those with significant mental health disorders, poor social determinants of health, the economically disadvantaged, language and health literacy issues, refugee populations etc.).
4. Studies that specifically focus on marginalized groups and include key stakeholders from these groups in the study. Academia has a mandate for research, but research can be focussed around the interests of the academic who runs the research laboratory and the need to produce results. This frequently creates tight exclusion criteria and does not always match the front- line needs of clinicians working in public facilities who treat Canadians from all walks of life and contextual backgrounds. This may mean funding studies with alternative methodologies, for example case series of n=1.
5. Novel approaches to address maladaptive neuroplasticity (not just psychologically based on fear/anxiety but somatosensory, motor in the cases of severe pain presentations with motor inhibition and autonomic sympathetic upregulation) versus sole focus on

catastrophizing and kinesiophobia where the focus has been for the last decade or more.

6. Studies testing the effects of combined therapies against a real treatment for chronic pain (testing against placebos are not helpful to make clinical or policy decisions as clinicians and patients are rarely pondering 1 treatment against nothing). For example, trials assessing the effectiveness of medication + exercise, or exercise + a CBT intervention, etc. These could also include investigations into the prevention of acute to chronic pain transition alongside identification of modifiable risk factors for chronic pain.

17. What would help to better integrate research and new knowledge into education and training, policy, clinical practice, and everyday life?

Knowledge and Education

- A national Pain Knowledge Translation hub – a national repository of best practices that is available to, informed by and iteratively expanded upon by all health professions
- The most impressionable healthcare providers are trainees and novices - calls for improved education in these groups will help build a new generation of healthcare providers that more effectively manage pain.
- Clinicians need options to integrate new knowledge. If a physician becomes aware of a clinical practice guideline that recommends supervised exercise and cognitive-behavioural therapy, but their patients do not have private insurance to access physiotherapy and mental health services, then the knowledge cannot be incorporated.
- Better links between researchers, clinicians, and integration of clinician researchers in partnership with academic researchers and patient researchers, and improved education on pain overall
- Clinical educators versed in pain and restoration of function who can assess and treat within a biopsychosocial spiritual framework. Physiotherapists are ideally trained for such a role. These educators should be available for both public and private clinicians
- Funding programs that specifically target knowledge translation in the area of pain. This should be focused on both KT research, but also, stakeholder-led (non-research) initiatives (such as Pain BC).
- Educating primary care and rehab providers early on in their career: they should not stumble upon it after working for 10 years and likely having caused damage along the way

Policy Engagement

- All of this could be addressed by having appropriate representation at the policy decision-making table. There is a clear impetus to save healthcare dollars by getting people out of hospitals as soon as possible and managed in the community, and to limit inappropriate opiate prescriptions and diagnostic imaging referrals. However, the folks managing people in the community, GPs, primary care, physiotherapy, mental health care providers do not have a strong enough voice to make sure community care is optimized (rather being the black box it currently is).

- For policy makers to realize that if we can prevent the development of chronic pain that it will save on downstream costs/resources
- Having a Task Force on Chronic Pain is certainly helpful for Canadians to get the right information: it adds value/credibility to the information being provided- I believe Canadians are now looking for good source of information so if this is the link that comes up first in a google search, that is a great start.

Part E – AN IMPROVED APPROACH TO PAIN

Reminder: All questions are optional; please only respond to questions to the extent you are comfortable and be mindful not to disclose any personal information about an identifiable 3rd party (e.g. your physician, a family member).

In the other sections of this questionnaire, we have asked you about:

- barriers to effective pain practices and how to address them (Part B)
- successful approaches to address pain and what makes them successful (Part C)
- priorities for research and what will help us to better integrate new learning and research into education, policy and practice (Part D)

18. What other strategies would help us to better understand, prevent, and/or manage pain in Canada?

Listening to those who live with pain

All of us: clinicians, educators, researchers, policy makers **need to listen to and hear more from** the people who suffer from and live with pain. We need to consider developing public (i.e. non-pharma) infrastructure to help strengthen the voice of people living with pain.

There is a need for better public understanding of the nature of pain, and the need for the public at large to realize that pain is complex, and that old pathoanatomical models, passive treatments especially do not work well for complex or chronic pain most times. Similar to what was done in Australia a few years ago, there is a need for advertisement campaigns to help the public understand that all pain does not equate with tissue damage; that pain is a normal part of life insofar as it does not severely impact quality of life, as are changes with aging. Targeting a better understanding also needs to be done within the education system for our children in the similar manner that healthy eating habits are taught.

Pain literacy, support, and prevention

We need to improve the basic health literacy of Canadians. Knowledge of healthy diets, work life balance, stress management, internal locus of health management versus external locus as we have created a society of “specialists” to “fix” Canadians. The industry of health care is slowly losing sight of the person in its individualized silos of care. A return to function, quality of life and assisting individuals in finding joy versus a strong focus on pain reduction (although in cases of extreme pain, pain reduction is necessary as part of the picture)

There is a need to provide supports for families in distress. The research around childhood abuse and the development of pain in adult life cannot be ignored (Noel, 2018) a need for

general practitioners to be screening for abuse to provide families with support early on to prevent the development of persistent pain.

As a health care system, Canada needs to be less reactive to a problem that arises and more proactive around prevention to identify issues early and provide access before an immune reaction occurs that creates neuroplastic changes that lead to persistent pain

When I think of how to improve chronic pain care – I think we need a multi-pronged approach that considers practice, education, rigorous research, support for evidence-based treatments and policy.

General Feedback

19. If you have any additional comments or ideas on addressing pain in Canada, please include them here:

- A master's degree that builds on the University of Alberta pain management certificate for education, and/or the promotion of the pain specialization training pathway available to physiotherapy trainees, and guidance on how to pursue it
- There cannot be a one-size fits all strategy. Economically this may look desirable, but it will not meet the needs of many Canadians
- Every Canadian deserves equitable access to evidence-based chronic pain management (independent of their ability to pay or their geographic location), including care that is provided by physiotherapists.

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