McMaster University | HEALTH FORUM

Rapid Evidence Profile

Examining the characteristics and effects of interdisciplinary pain clinics for military personnel and Veterans experiencing chronic pain

11 August 2023

[MHF product code: REP 54]

Appendices

1) Methodological details
2) Details about each identified evidence synthesis
3) Details about each identified single study
4) Findings from jurisdictional scans of experiences in each of the 'Five Eyes' countries
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Appendix 1: Methodological details

We use a standard protocol for preparing rapid evidence profiles (REP) to ensure that our approach to identifying research evidence is as systematic and transparent as possible in the time we were given to prepare the profile.

Identifying research evidence

For this REP, we searched Health Systems Evidence, Social Systems Evidence, PubMed for:
1) evidence syntheses
2) protocols for evidence syntheses that are underway.

We searched Health Systems Evidence and Social Systems Evidence using an open text search for (interdisciplinary OR multidisciplinary) AND (chronic pain). In PubMed, we searched using an open text search for (interdisciplinary OR multidisciplinary) AND (chronic pain) combined with filters for systematic reviews and last 10 years. Links provide access to the full search strategy. In addition, we hand-searched select Veteran specific evidence portals, including the Military Clearinghouse for Family Readiness, the *Journal of Military and Veterans' Health*, and Forces in Mind Trust Research Centre.

Each source for these documents is assigned to one team member who conducts hand-searches (when a source contains a smaller number of documents) or keyword searches to identify potentially relevant documents. A final inclusion assessment is performed both by the person who did the initial screening and the lead author of the rapid evidence profile, with disagreements resolved by consensus or with the input of a third reviewer on the team. The team uses a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provides a running list of considerations that all members can consult during the first stages of assessment.

During this process we include published, pre-print and grey literature. We do not exclude documents based on the language of a document. However, we are not able to extract key findings from documents that are written in languages other than Chinese, English, French or Spanish. We provide any documents that do not have content available in these languages in an appendix containing documents excluded at the final stages of reviewing. We excluded documents that did not directly address the research questions and the relevant organizing framework.

Assessing relevance and quality of evidence

We assess the relevance of each included evidence document as being of high, moderate or low relevance to the question.

Two reviewers independently appraised the quality of the guidelines we identified as being highly relevant using AGREE II. We used three domains in the tool (stakeholder involvement, rigour of development and editorial independence) and classified guidelines as high quality if they were scored as 60% or higher across each of these domains.

Two reviewers independently appraise the methodological quality of evidence syntheses that are deemed to be highly relevant. Disagreements are resolved by consensus with a third reviewer if needed. AMSTAR rates overall methodological quality on a scale of 0 to 11, where 11/11 represents an evidence synthesis of the highest quality. High-quality evidence syntheses are those with scores of eight or higher out of a possible 11, medium-quality evidence syntheses are those with scores between four and seven, and low-quality evidence syntheses are those with scores less than four. It is important to note that the AMSTAR tool was developed to assess evidence syntheses focused on clinical interventions, so not all criteria apply to those pertaining to health-system arrangements or to economic and social responses. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, an evidence synthesis that scores 8/8 is generally of comparable quality to another scoring 11/11; both ratings are considered 'high scores.' A high score signals that readers of the evidence synthesis can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the evidence synthesis should be discarded, merely that less confidence can be placed in its findings and that the evidence synthesis needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1): S8.)

Preparing the profile

Each included document is hyperlinked to its original source to facilitate easy retrieval. For all included guidelines, evidence syntheses and single studies (when included), we prepare a small number of bullet points that provide a summary of the key findings, which are used to summarize key messages in the text. Protocols and titles/questions have their titles hyperlinked, given that findings are not yet available. For this profile, we only prepared bulleted summaries of key findings for documents deemed to be of high relevance. For those classified as medium or low relevance, we list the title with a link to the primary source for easy retrieval if needed. We then draft a summary that highlights the total number of different types of highly relevant documents identified (organized by document), as well as their key findings, date of last search (or date last updated or published), and methodological quality.

Identifying experiences from other countries and from Canadian provinces and territories

For each rapid-evidence profile, we collectively decide on what countries to examine based on the question posed. For this profile, we focused on the 'Five Eye' countries – Australia, Canada, New Zealand, United Kingdom and United States – as well as the Netherlands given their experience implementing an innovative model for interdisciplinary care for chronic pain. For each country and each Canadian province or territory, we searched government websites, including websites of Departments of Defence and Departments of Veterans' Affairs to determine whether any interdisciplinary models were being centrally supported or funded for active military personnel or veterans.

Appendix 2: Details about each identified evidence synthesis

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacologic therapy
  ▪ Physical treatments
  ▪ Psychological treatments
  ○ Prescription non-opioid pharmacologic therapies
  ○ Non-opioid pharmacologic therapies
  ○ Prescription opiate therapies
  ○ Post-discharge supports
• Delivery arrangements
  ○ Providers
  ▪ Physicians
  ▪ Psychologists
  ▪ Pharmacists
  ▪ Nurses
  ▪ Allied health professionals
	Descriptions of what constitutes a multidisciplinary chronic pain treatment clinic varies considerably across the literature, and a wide range of medical, physical and psychological pain treatments were made available across the clinics studied
	• Data capture and reporting across multidisciplinary pain clinics should be improved to help inform policymakers about the scope, demand and accessibility of these facilities
	• There is an urgent need to address gaps in pain management and enhance access to multidisciplinary pain treatment facilities worldwide
		Medium	No	4/9	2014	No	Personal characteristics associated with discrimination (age, disability)

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacologic therapy
  ▪ Physical treatments
  ▪ Psychological treatments
  ○ Prescription opiate therapies
• Delivery arrangements
  ○ Providers
  ▪ Physicians
  ▪ Psychologists
  ▪ Nurses
  ▪ Allied health professionals
	State laws defining pain clinics focus primarily on identifying clinics with potentially suspicious behaviour related to narcotic treatment, while quality indicators associated with multidisciplinary or interdisciplinary treatment are often included in safe harbour laws, incentivizing clinics to provide such treatments and exempting them from regulations
	• Multidisciplinary pain clinics involve multiple approaches to pain treatment, while interdisciplinary pain clinics integrate multiple approaches to pain treatment through coordinated team efforts
		Low	No	4/9	2016	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
	• Despite this difference, no U.S. state aside from Ohio has a specific definition for interdisciplinary treatment clinics. Ohio has an interdisciplinary safe harbor law recognizing accredited interdisciplinary pain rehabilitation programs • The inconsistency between state laws and medical literature definitions of pain clinics may lead to providers overlooking opportunities for multidisciplinary or interdisciplinary treatment						

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacologic therapy
  ▪ Physical treatments
  ▪ Psychological treatments
  ○ Prescription opiate therapies
• Delivery arrangements
  ○ Providers
  ▪ Physicians
  ▪ Psychologists
  ▪ Pharmacists
  ▪ Nurses
  ▪ Allied health professionals
	Interdisciplinary intensive outpatient treatment programs for chronic pain, with a focus on physical and psychosocial components, result in decreased pain intensity, pain catastrophizing and depressive symptoms, leading to overall improvement in quality of life
	• Interdisciplinary intensive outpatient programs treating chronic pain vary in composition and duration, but all include physical and psychosocial components
	• Supporting their expansion has the potential to help reduce long-term opioid use in non-cancer chronic pain and achieve national pain management goals
		High	No	6/11	2018	No	None identified

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacological therapy
  ▪ Physical treatments
  ▪ Psychological therapies
  ○ Over-the-counter pharmacological therapies
• Delivery arrangements
  ○ Providers
	Over time, inpatient pain management programs have become more inclusive of interdisciplinary approaches (traditional and non-traditional) to address the multifaceted components of pain
	• The purpose of this mapping review was to describe the components of inpatient pain management programs and their evolution over time
		High	No	3/9	2018	No	Place of residence
							Gender/sex

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
▪ Physicians ▪ Psychologists ▪ Nurses ▪ Allied health professionals ▪ Social workers ▪ Others o Settings ▪ Hospital-based o Model of care ▪ Shared care • Priority populations o Women • Equity-centred quadruple-aims metrics examined o Health outcomes	• Over-the-counter pharmacological therapies have decreased in use, while other interventions (e.g., physical, psychological, educational, acceptance-based occupational, and alternative treatments) have increased • Inpatient pain programs use a wide variety of personnel to provide effective care (e.g., social workers, alternative treatment professionals, and family members), but physical therapists, physicians and psychologists are most frequently involved						
• Programs, services and products in interdisciplinary pain clinics o Non-pharmacological therapy ▪ Physical treatments ▪ Psychological therapies o Over-the-counter pharmacological therapies • Delivery arrangements o Providers ▪ Physicians ▪ Psychologists ▪ Allied health professionals ▪ Other o Setting ▪ Hospital-based o Model of care ▪ Shared decision-making	Shared-decision models of interdisciplinary treatment for chronic pain are associated with improved pain-related health outcomes in persons with chronic pain • The purpose of this systematic review was to identify successful components of chronic pain management programs in primary-care settings • This review concluded that interdisciplinary pain management clinics using diverse treatments (e.g., educational interventions, psychological and physical treatment and medication reduction) and applying a shared decision-making model of care were associated with better health outcomes in persons with chronic pain	High	No	6/10	2020	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Equity-centred quadruple-aims metrics examined ▪ Health outcomes							
• Programs, services and products in interdisciplinary pain clinics ○ Non-pharmacologic therapy ▪ Physical treatments ▪ Psychological therapies ○ Non-opioid pharmacologic therapies ○ Prescription opiate therapies ○ Others • Delivery arrangements ○ Providers ▪ Physicians ▪ Psychologists ▪ Pharmacists ▪ Nurses/nurse practitioners ▪ Allied health professionals ○ Setting ▪ Community-based ▪ Hospital-based ▪ Virtual care ○ Model of care ▪ Shared care (between primary care and at least one of the following: secondary, tertiary, rehabilitation community-based or social care) • Governance arrangements ○ Networks/multi-institutional arrangements	Patients with chronic musculoskeletal pain appear to benefit more from interdisciplinary rehabilitation interventions (involving multiple disciplines of healthcare providers) with a broader content and longer duration of treatment than from standard care • When care is shared between primary care and secondary, tertiary or rehabilitation settings, extensive interventions that include additional treatment hours and assessment with more healthcare disciplines depending on patients' needs, psychological and exercise treatments were more effective than educational interventions alone (although evidence has high risk of bias) • Managing work and workplace adjustments appear to be factors for successful return to work (limited evidence) • When it comes to care experiences, implementing new treatments has the potential to impact patient satisfaction, as previously dissatisfied individuals may encounter additional challenges in adhering to the newly introduced care pathways • The review revealed that interventions conducted within primary healthcare settings led to an improvement in healthcare provider satisfaction • Some included studies found that community-based interventions can lower healthcare costs • These include using providers of various disciplines, such as case managers and pre-	High	No	6/10	2019	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Equity-centred quadruple-aim metrics examined
  ○ Health outcomes
  ○ Care experiences
  ○ Provider experiences: healthcare providers' satisfaction
  ○ Per-capita costs
	existing specialists of patients, which appears to impact the duration of sick leave positively						

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacologic therapy
  ▪ Physical treatments: physical activity/exercise
  ▪ Psychological therapies: coping skills therapy
  ○ Pharmacologic therapy: type unspecified
  ○ Others: education, occupational therapy
• Delivery arrangements
  ○ Providers
  ▪ Physicians
  ▪ Psychologists
  ▪ Allied health professionals: physical therapists, occupational therapists, social workers
• Equity-centred quadruple-aim metrics examined
  ○ Health outcomes
	There is very low to low quality of evidence regarding prognostic factors that can predict health-related quality of life in patients with chronic pain after interdisciplinary pain rehabilitation
	• Pain intensity at the baseline is not a conclusive predictor of health-related quality of life (hrQoL) after interdisciplinary pain rehabilitation (IPR) in patients with chronic pain
	• It is unclear whether cognitive behavioural factors, initial emotional distress and physical functioning influence hrQoL following IPR
		Low	No	7/10	2020	Yes	None identified

• Programs, services and products in interdisciplinary pain clinics
  ○ Prescription non-opioid pharmacologic therapies
  ○ Non-opioid pharmacologic
	The inclusion of clinical pain and depression specialists on the case management team shows greatest impact on achieving greater patient improvements among middle-aged	High	No	7/10	2016	No	Place of residence

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Prescription opiate therapies ○ Others • Delivery arrangements ○ Providers ▪ Physicians ▪ Pharmacists ▪ Allied health professionals ○ Setting ▪ Community-based ▪ Virtual care • Equity-centred quadruple-aim metrics examined ○ Health outcomes	males seen in primary-care clinics for chronic low back pain • The common elements of multimodal chronic pain care delivery encompass regular case management meetings, pharmacotherapy algorithms, care coordination teams and provision of mental health treatment • Patient education curriculum commonly included group education sessions and other passive patient education such as providing educational materials and written patient guides • The integration of multimodal chronic pain care delivery with decision support and proactive treatment monitoring has been found to possess the strongest evidence of yielding clinically meaningful enhancements in pain intensity and pain-related functionality within 9 to 12 months in the primary-care setting • The algorithm-guided stepped care models SCAMP (Stepped Care for Affective Disorders and Musculoskeletal Pain) and SCOPE (Stepped Care to Optimize Pain Care Effectiveness) resulted in the greatest clinically significant improvements in pain intensity and pain-related function						
• Delivery arrangements ○ Providers ▪ Allied health professionals ○ Setting ▪ Hospital-based • Equity-centred quadruple-aim metrics examined	In chronic pain management programs, younger age is a predictor of attrition, but treatment schedule may be modified to address this predictor. • Practical considerations among younger patients, such as having a day job or young children, which may conflict with an	Low	No	4/9	2019	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Health outcomes ○ Care experiences	intensive interdisciplinary treatment program, may be considered						
• Delivery arrangements ○ Providers ▪ Psychologists ▪ Allied health professionals: physiotherapists, occupational therapists • Equity-centred quadruple-aim metrics examined ○ Health outcomes: pain severity or intensity	Low-strength evidence suggests that multidisciplinary pain programs consisting of physiotherapy, occupational therapy and psychology for chronic musculoskeletal pain are effective in improving pain among active serving military personnel	High	No	7/10	2021	Yes	None identified
• Programs, services and products in interdisciplinary pain clinics ○ Non-pharmacologic therapy ▪ Physical treatments (e.g., acupuncture, physical activity, physical therapy) ▪ Psychological therapies (e.g., operant-behavioural therapy, cognitive-behavioural therapy, acceptance and commitment therapy)	Interdisciplinary pain rehabilitation programs effectively treat chronic pain, with significant improvements in pain intensity, depressed mood and pain catastrophizing for both men and women, and no significant sex differences in outcomes • Interdisciplinary pain rehabilitation programs were found to be effective for both men and women in treating chronic pain across multiple domains • Location, specific population examined and treatment duration did not significantly impact sex differences in outcomes	High	No	5/10	2021	No	Gender/sex
• Programs, services and products in interdisciplinary pain clinics ○ Non-pharmacologic therapy ▪ Physical treatments (e.g., acupuncture, physical activity, physical therapy) ▪ Psychological therapies (e.g., operant-behavioural therapy, cognitive-	Multidisciplinary rehabilitation programs for chronic low back pain have been found to provide better long-term pain relief, improve disability outcomes, and increase likelihood of patients being able to work compared to usual care or physical treatment • Multidisciplinary rehabilitation programs for chronic low back pain led to reductions in pain and disability	High	No	11/11	2014	No	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
behavioural therapy, acceptance and commitment therapy)	• These programs were more effective than usual care (moderate-quality evidence) and physical treatments (low-quality evidence) in improving pain and disability in the long term • Compared to surgery, multidisciplinary rehabilitation had similar outcomes for pain and disability, but carried a lower risk of adverse events						

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacologic therapy
  ▪ Physical treatments (e.g., acupuncture, physical activity, physical therapy)
  ▪ Psychological therapies (e.g., operant-behavioural therapy, cognitive-behavioural therapy, acceptance and commitment therapy)
  ○ Prescription opiate therapies
• Delivery arrangements (how care is organized)
  ○ Providers
  ▪ Psychologist
  ▪ Nurses
  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists)
  ○ Setting
  ▪ Community-based
  ▪ Hospital-based
• Priority populations
• People with substance-use issues
	Multidisciplinary pain programs do not actively decrease the prescribing and use of opioids unless the combination of active medication management is coupled with the changing of an individual's opioid prescriber
	• The primary objective of this systematic review was to examine the current literature on multidisciplinary care programs to assess its effectiveness on opioid use for its target population.
	• Of the included articles within the review, multidisciplinary care programs that focused on pain and functional improvement, behavioural changes among the patient, changing of the opioid prescriber and active medication management in combination were able to result in opioid dose reductions
	• However, it is worth noting that within 12 months of completing the program, an estimated 20-40% of participants relapsed and resumed opioid use
		Medium	No	6/10	2018	None	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Delivery arrangements
  ○ Model of care
  ▪ Psychosocial versus medical
• Equity-centred quadruple-aim metrics examined
  ○ Health outcomes
	Interdisciplinary multimodal pain treatment programs that apply the biopsychosocial model generally improve patients' outcomes when comparing pre-intervention and post-intervention measures, and these improvements are generally maintained at follow-up
	• This systematic review examines how outcomes change over time for patients who participate in interdisciplinary multimodal pain treatment programs that aim to improve patients' overall functioning and well-being
	• The programs included in this review varied substantially and involved a median of four different healthcare professionals and five different treatment modalities; exercise, education, and relaxation were the most commonly included treatments
	• There were significant positive treatment effects observed when comparing pre-treatment and post-treatment outcome measures for physical, mental and social health in 85% of cases
	• In general, favourable pre-post effects are maintained until follow-up or further improved upon, but some patients experience a relapse pattern
		High	No	8/10	2020	None	None identified

• Delivery arrangements
  ○ Setting
  ▪ Community-based
  ○ Model of care
  ▪ Psychosocial versus medical
• Equity-centred quadruple-aim metrics examined
	Multidisciplinary treatment programs for chronic pain appear to deliver modest improvements in outcomes compared to usual care and have been recommended in guidelines for specific patient circumstances, but there is a lack of cost-effectiveness evidence
	• Multidisciplinary treatment programs for patient with chronic non-malignant pain
		High	No	7/11	2017	None	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Health outcomes ○ Per-capita costs	were generally found to produce improvements in pain, function and disability, though the marginal improvement beyond usual care is dependent on the comparator • Multidisciplinary treatments generally produce better outcomes for quality of life, anxiety and depression than comparators, but these differences are not always significant • Three randomized controlled trials reported on healthcare resource use; two found no difference with comparators while one found that multidisciplinary care patients had fewer general practitioner visits than standard care patients • There is some evidence to suggest that multidisciplinary care produces better work-related outcomes than usual care • In studies of patients with fibromyalgia, multidisciplinary care produced better outcomes for several physical and mental health outcomes • No cost-effectiveness studies were identified • Three guidelines pertaining to multidisciplinary treatment programs for chronic pain were identified						

Appendix 3: Details about each identified single study

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations

• Programs, services and products in interdisciplinary pain clinics
  ○ Non-pharmacologic therapy
  ▪ Psychological therapies (e.g., operant-behavioural therapy, cognitive-behavioural therapy, acceptance and commitment therapy)
• Delivery arrangements (how care is organized)
  ○ Providers
  ▪ Physicians
  ▪ Psychologists
  ▪ Pharmacists
  ▪ Nurses
  ▪ Allied health professionals (e.g., physiotherapists, occupational therapists)
  ▪ Social workers
  ○ Setting
  ▪ Hospital-based
• Equity-centred quadruple-aim metrics examined
  ○ Health outcomes
• Care experiences
	Interdisciplinary pain management programs are effective in supporting veterans with chronic pain; veterans and civilians participating in such programs often displayed high levels of gratitude, improved coping strategies, confidence and function
	• The objective of this primary study was to evaluate the impact of a four-week interdisciplinary pain management program among a cohort of 16 veterans and 23 civilians
	• The findings from this study revealed several common themes among both population groups, including gratitude, improved confidence and coping strategies, feelings of empowerment and a renewed sense of hope in their path to recovery, the need for support groups and additional follow-ups, and wishing they had joined the program sooner
		High	*Publication date:* 2022
			
			Jurisdiction studied: Canada
			
			Methods used: Qualitative analysis
				None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Study characteristics	Equity considerations

• Delivery arrangements (how care is organized)
  ○ Providers
  ▪ Physicians
  ▪ Pharmacists
  ▪ Nurses
  ▪ Social workers
  ○ Setting
  ▪ Hospital-based
  ○ Model of care
• Priority populations
  ○ People with mental health issues
  ○ People with substance-use issues
  ○ Veterans who are homeless or precariously housed
• Equity-centred quadruple-aim metrics examined
  ○ Health outcomes
	An integrated primary-care model can help to decrease acute care visits and behavioural health service use among veterans who routinely visit the emergency department; this model of care can further improve patient and health system outcomes for vulnerable population groups
	• The focus of this primary study was to evaluate the healthcare service utilization changes among veterans that participated in an integrated primary-care model clinic for a total of 12 months; a particular focus was placed on evaluating changes in emergency department, inpatient, primary care and behavioural health visits
	• The findings from this study revealed that among the 994 patients that were participating in integrated primary-care clinic, there was an overall decrease in emergency department, inpatient and behavioural health visits
	• Veterans that frequently visited the emergency department, struggled with substance use disorders and experienced homelessness observed improved health outcomes with this model of care
		High	*Publication date:* 2023
			
			Jurisdiction studied: Salt Lake City, Utah, United States of America
			
			Methods used: Interrupted time series
				• Occupation
				• Socioeconomic status
				• Social capital

Appendix 4: Findings from jurisdictional scans of experiences in each of the 'Five Eyes' countries

Jurisdiction	Identified model	Model description	Dimension of organizing framework

Australia	Shared decision-making	• The Australian Department of Veterans' Affairs promotes a shared decision-making model of care for inter- and multidisciplinary chronic pain management centres
		• Pain management centres that include coordination of diverse personnel including various healthcare providers, social workers and family members are helpful in addressing the multifaceted components of chronic pain and helping restore functional engagement
		• Multifaceted components of chronic pain that can be addressed in pain management centres may include emotional difficulties, sleep impairments, exercise limitations and social disconnection
		• Healthcare professionals interested in providing care to Veterans experiencing chronic pain can be remunerated by the Coordinated Veteran's Care Program
		• The Australian Department of Veterans' Affairs can help Veterans access community and hospital based sources to manage chronic pain
			• Programs, services and products in interdisciplinary pain clinics
			  ○ Non-pharmacological therapy
			  ▪ Physical treatments
			  ▪ Psychological therapies
			  ○ Over-the-counter pharmacological therapies
			• Delivery arrangements
			  ○ Providers
			  ▪ Physicians
			  ▪ Psychologists
			  ▪ Pharmacists
			  ▪ Allied health professionals
			  ▪ Social workers
			  ▪ Others
			  ○ Settings
			  ▪ Community-based
			  ▪ Hospital-based
			  ○ Model of care
			  ▪ Shared decision-making
			• Financial arrangements
			  ○ Remunerating providers
			  ▪ Fee-for-service
			• Equity-centred quadruple-aims metrics examined
			  ○ Health outcomes

Canada	The Chronic Pain Centre of Excellence (CPCoE) for Canadian Veterans	• The CPCoE is a research institution focusing on pain management and therapies for veterans
		  ○ The CPCoE partners with a network of pain clinics to conduct research and deliver care
		• The CPCoE has published some resources to guide chronic pain treatment for Veterans
		• The Best Advice Guide recommends multidisciplinary approaches to pain care and states that the CPCoE and
			• Delivery arrangements (how care is organized
			  ○ Model of care
			• Shared decision-making (patients and providers)

Jurisdiction	Identified model	Model description	Dimension of organizing framework
		connected clinics believe in the importance of actively involving veterans in their care	

	Veterans Affairs Canada (VAC) approved Interdisciplinary Pain Management Centres	• As stated on the CPCoE website, veterans who experience chronic pain due to service-related injuries may register to receive Treatment Benefits from VAC
		  ○ VAC will then refer them to an approved Interdisciplinary Clinic (IDC)
		• MDCs are intended to treat complex health conditions
		• MDCs have many different health professionals including physicians, psychologists, physiotherapists, social workers, kinesiologists and recreational therapists that work as a team to provide treatment
		• As of 2019, there were 185 outpatient clinics, 26 inpatient clinics and 16 combination clinics
		• For services at MDC clinics providers must submit a claim to the Federal Health Claims Processing Service
			• Delivery arrangements (how care is organized)
			  ○ Providers
			  ▪ Physicians
			  ▪ Psychologists
			  ▪ Social workers
			  ▪ Others
			  ○ Setting
			  ▪ Community-based
			  ▪ Hospital-based
			  ○ Model of care
			  ▪ Shared decision-making (patients and providers)
			• Financial arrangements (how care is paid for)
			• Remunerating providers

Netherlands	Stepped Care Approach	• According to the Dutch Care Standard Chronic Pain of 2017, adapted in 2020 by Zorginstituut Nederland (National Healthcare Institute), the coordination of multidisciplinary treatment for chronic pain involves the designation of the main practitioner, who is a medical professional with ultimate responsibility, as well as a central care provider, who serves as a consistent point of contact for the patient
		• Furthermore, a chain care coordinator assumes the responsibility of coordinating the provision of healthcare services within the specified territory for those suffering from chronic pain
		• Stepped care is employed throughout the formulation of the treatment plan, which entails a sequential and incremental approach to the provision of healthcare services
		  ○ Stepped Care commences with prevention and self-care (step 1), then multidisciplinary diagnostics, pain education and treatment in primary care (step
			• Programs, services and products in interdisciplinary pain clinics
			  ○ Non-pharmacologic therapy
			  ▪ Physical treatments: physical therapy, electrical nerve stimulation
			  ▪ Psychological therapies: occupational therapy, psychotherapy (e.g., behavioural therapy, mindfulness, meditation)
			  ○ Over-the-counter pharmacologic therapies
			  ○ Pharmacologic therapy: type unspecified
			• Delivery arrangements
			  ○ Providers
			  ▪ Physicians/psychiatrists/pain consultants
			  ▪ Psychologists

Jurisdiction	Identified model	Model description	Dimension of organizing framework
		2), in primary and secondary care (step 3), and in secondary or tertiary care (step 4)	▪ Allied health professionals (e.g., paramedics) ▪ Social workers ▪ Others: chain care coordinator ○ Setting ▪ Community-based ▪ Hospital-based ○ Model of care ▪ Psychosocial versus medical ▪ Shared decision-making (patients and providers) ▪ Shared care (primary and specialty care) • Priority populations ○ People with mental health issues • Equity-centred quadruple-aim metrics examined ○ Health outcomes: pain severity/ intensity • Care experiences: patient satisfaction
New Zealand	None identified	• None identified	• None identified
United States	The American Chronic Pain Association (ACPA) – Stanford Resource Guide to Chronic Pain Management	• The U.S. Department of Veterans Affairs (VA) emphasizes that medication or medical procedure alone can provide at best 25 to 30% relief for those suffering from chronic pain ○ Better relief is found when medications and invasive interventions are replaced by or combined with active rehabilitation and education approaches, and psychological/behavioural treatments ○ VA recommends the ACPA – Stanford Resource Guide, which helps users better understand and explore treatment options ranging from various functional restoration approaches, active interventions, nutrition, complementary, alternative and integrative medicine, acupuncture and acupressure, invasive and non-invasive physical modalities, and medications	• Programs, services and products in interdisciplinary pain clinics ○ Non-pharmacologic therapy ▪ Physical treatments ▪ Psychological treatments ○ Over-the-counter pharmacologic therapies ○ Prescription non-opioid pharmacologic therapies ○ Medical cannabis authorized by a healthcare provider ○ Non-opioid pharmacologic therapies (e.g., NSAIDs, SNRIs) ○ Prescription opiate therapies ○ Post-discharge supports • Delivery arrangements ○ Providers

Jurisdiction	Identified model	Model description	Dimension of organizing framework

		• Active interventions consist of many types of interventions where participants use their mind and/or body as part of the treatment such as education, yoga and pilates, cognitive-behavioural therapy for pain, and stress-reducing interventions such as mindfulness-based stress reduction, guided imagery, and art and music
		• Functional restoration approaches use a whole person approach to relieving pain through restoring the person with pain's ability to meaningfully engage in life, bringing together biology, psychological and social aspects of the person's life
		  ○ These approaches include interdisciplinary care programs involving multiple healthcare professionals (e.g., physician, pharmacist, psychologist, occupational therapist, physical therapist) providing coordinated services at the same facility
		  ○ They also include multidisciplinary care programs through which providers offer services from different locations, making coordination a bit more challenging
			▪ Physicians
			▪ Psychologists
			▪ Pharmacists
			▪ Nurses
			▪ Allied health professionals

	Chronic Pain Rehabilitation Program (CPRP)	• The U.S. Department of Veterans Affairs (VA) recommends the Chronic Pain Rehabilitation Program (CPRP), a 19-day inpatient chronic pain rehabilitation program designed to help Veterans and active-duty service members cope with chronic pain. The program uses an active rehabilitation, whole person, and team-based approach to provide a combination of group and individual treatments that span movement-based therapies, behavioural strategies, pain education, rehabilitation therapies, family involvement and medical consultation/management	• Programs, services and products in interdisciplinary pain clinics
			  ○ Non-pharmacologic therapy
			  ▪ Physical treatments
			  ▪ Psychological treatments
			• Delivery arrangements
			  ○ Providers
			  ▪ Physicians
			  ▪ Psychologists
			  ▪ Nurses
			  ▪ Allied health professionals

	The Pain Empowerment Anywhere (PEAK) Program	• The U.S. Department of Veteran's Affairs (VA) recommends the Pain Empowerment Anywhere (PEAK) Program that uses the same active rehabilitation, whole person and team-based approach as CPRP	• Programs, services and products in interdisciplinary pain clinics
			  ○ Non-pharmacologic therapy
			  ▪ Physical treatments
			  ▪ Psychological treatments

Jurisdiction	Identified model	Model description	Dimension of organizing framework
		○ Developed during the pandemic, the program is fully virtual and consists of a 5-week pain rehabilitation program targeting Veterans during which they receive a pain medicine evaluation, tailored exercise program, training in mindful meditation, effective communication and coping skills, education about the physical and emotional effects of pain, adaptive living skills to improve home-related activities, recreational activities to increase socialization and engagement in leisure activities, and regular team meetings with providers	• Delivery arrangements ○ Providers ▪ Physicians ▪ Psychologist ▪ Nurses ▪ Allied health professionals
United Kingdom	Veterans' Pain Management Programme	• The Veterans' Pain Management Programme is a group-based, multidisciplinary program that focuses on education, offering patients a range of strategies to deal with pain and allowing veterans to support one another • The 10-day virtual program runs over nine months and involves a consultant in pain management, consultant psychologist, nurse, physiotherapist, consultant psychiatrist and mental health nurse • Psycho-education is an important component; patients are taught about the brain and pain and how to manage pain and its impact on mood from a psychological perspective • There is one day of the program in which families and/or friends of Veterans are invited to participate to acknowledge the important role of support networks • The program aims to improve veterans' physical health, mental health and overall functioning and provide them with coping strategies • The hospital that delivers this program runs six to eight program cohorts per year, each involving eight to 10 veterans • Veterans first need a referral from a general practitioner to be eligible and then are required to undergo a two-hour virtual assessment to determine suitability	• Delivery arrangements ○ Providers ▪ Physicians ▪ Psychologists ▪ Allied health professionals ▪ Others ○ Setting ▪ Virtual care ○ Model of care ▪ Psychosocial versus medical • Programs, services and products in interdisciplinary pain clinics ○ Non-pharmacologic therapy ▪ Psychological therapies • Equity-centred quadruple-aim metrics examined ○ Health outcomes

Jurisdiction	Identified model	Model description	Dimension of organizing framework
		○ It is noted that there may be other, more suitable programs for patients experiencing multiple physical and psychological difficulties • The program does not involve hands-on treatment or physiotherapy and does not aim to prescribe more pain medications, but medication use is reviewed • An evaluation of the Veterans' Pain Management Programme found it to be effective at improving a range of outcomes	

Appendix 5: Documents that were excluded at the final stages of reviewing

Document type	Hyperlinked title
Evidence synthesis	A cost analysis of an interdisciplinary pediatric chronic pain clinic
	A systematic review on intensive interdisciplinary pain treatment of children with chronic pain
	Systematic review of economic evaluations in multidisciplinary pain management services for managing people with fibromyalgia or chronic widespread pain
	Multidisciplinary outpatient care program versus usual care: Cost-benefit analysis in patients with chronic low back pain

Waddell K, Wilson MG, Ali A, Cura N, Dass A, DeMaio P, Phelps A, Saif A, Rapid evidence profile #54: Examining the characteristics and effects of interdisciplinary pain clinics for military personnel and Veterans experiencing chronic pain, 11 August 2023.

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