CURRENT PATTERNS IN CHRONIC NON-CANCER PAIN MANAGEMENT IN PRIMARY CARE

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Introduction

Chronic pain is common both worldwide and in Canada: the Canadian Pain Society Nanos Pain Survey, carried out in 2007-2008, found that 18% of Canadian adults suffer from moderate to severe chronic pain daily or on most days of the week.[1] The 2010 Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain stated that CNCP affects "substantial and growing numbers of the Canadian population."[2]

The classification of chronic pain as nociceptive, neuropathic or mixed in origin can be vital to effective treatment, since patients with one type of pain may be resistant to therapies that are effective in other types.[3] However, it is not currently clear what proportion of patients whose pain is currently classified as nociceptive or neuropathic actually have mixed pain. The number may be greater than expected: a recent Danish study investigating the use of a self-administered pain questionnaire found that in a population of 1,322 chronic pain patients, 87 to 95% had musculoskeletal pain – and 39 to 43% of those patients also had neuropathic pain components.[4]

Although chronic pain has the greatest cost impact on the publicly funded health care system, it also has a substantial impact on private insurance carriers and employers. The objective of this practice audit survey was to characterize the clinical management patterns of current chronic non-cancer pain specifically in privately insured Canadian patients, including pharmacotherapy patterns and the use of physiotherapy and psychotherapy.

Aims:

- To understand Canadian primary care pain management practices
- To compare physician perceptions of pain patterns in their practices versus results from actual patients
- To assess adherence to 2010 recommendations from the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain[2]
- To document factors that influence physician treatment recommendations

Methods

This study was observational and non-interventional. Surveys were administered during regular care patient visits to capture information on usual patient care practices.

Before the start of the study, primary care physicians completed a practice profile questionnaire based on physician recall, which asked about years in practice, type of practice, pain patient profiles, wait times, consultation duration and follow-up. Between May 2011 and August 2011, they completed a non-interventional survey on up to 20 chronic pain patients. The survey covered patient demographics and social history,

medical history, pain assessment, and therapeutic goals. Mirror questions in the surveys facilitated comparison between the physicians' perception of their practice profile and the point-of-care patient questionnaires.

Eligible patients had:

- a confirmed diagnosis of moderate to severe chronic non-cancer pain
- pain severity sufficient to justify use of a weak or strong opioid
- pain duration of at least 3 months
- age ≥18 years
- private insurance coverage for medications and other treatments.

Results

A total of 30 primary care physicians participated in the study and completed surveys for 294 chronic non-cancer pain patients (see Table 1 for physician characteristics and Table 2 for patient characteristics).

Table 1. Physician characteristics (n=30)

Years in practice	
>20	63%
10-20	30%
<10	7%
Location of practice	
Urban	60%
Suburban	40%
Rural	0%
Type of practice	
Family/general practitioner with special interest/training in pain management	47%
Family/general practitioner	33%
Pain management specialist	13%
Other	7%

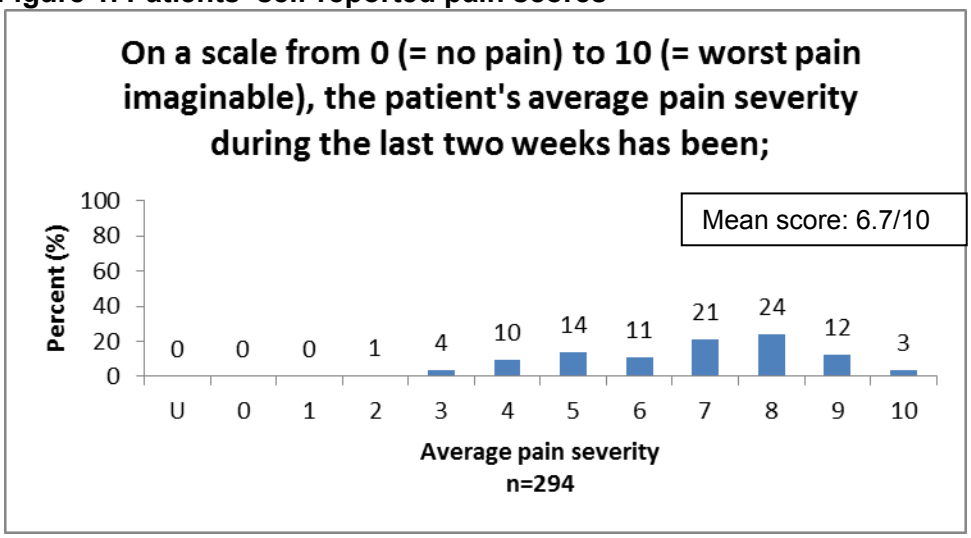
Table 2. Patient characteristics (n=294)

Sex	
Male	55%
Female	45%
Employment status	
On long-term disability	33%
Working full-time	30%
Retired	14%
Working part-time	6%
On short-term disability	5%
Self-employed	4%
Other	8%
Relevant comorbid conditions	
Sleep disorder	57%
Depression	49%

Obesity	30%
Cardiovascular disease	21%
Other mood disorder/psychiatric condition	18%
Substance abuse disorder	11%
Impaired renal function	3%
Primary reason for this visit	
Routine follow-up	69%
Increased/breakthrough pain	17%
First presentation with this pain complaint	7%
Not primarily pain-related	4%
Adverse effects of medication	2%
Initiation of a treatment plan	1%

To assess patients' pain, 54% of participating physicians used the Visual Analogue Scale and 58% used the standardized Brief Pain Inventory. Patients' self-reported pain scores in the last two weeks are shown in Figure 1.

Figure 1. Patients' self-reported pain scores



As part of the practice profile questionnaire, participating physicians estimated the proportion of patients in their practices who had various types of pain. At that time, before the study began, they estimated that 24% of their patients had nociceptive pain, 19% had neuropathic pain, and 38% had mixed pain. However, patient assessments throughout the study (Figure 2) showed that almost twice as many patients (65%) had mixed pain than had been estimated. A number of patients had multiple underlying causes for their pain (Figure 3).

Figure 2. Physician assessments of patients' types of pain

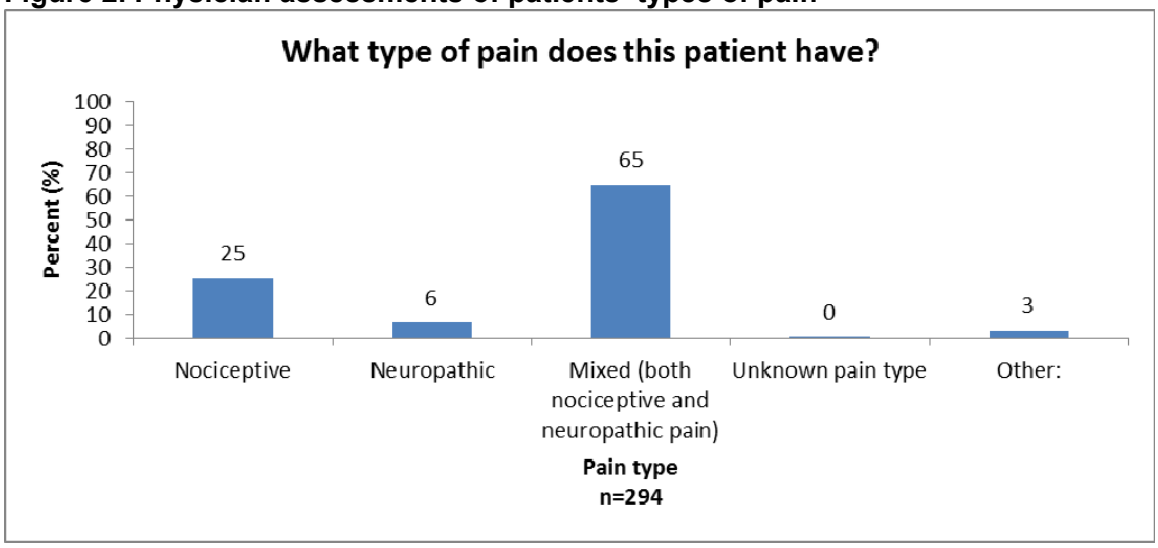
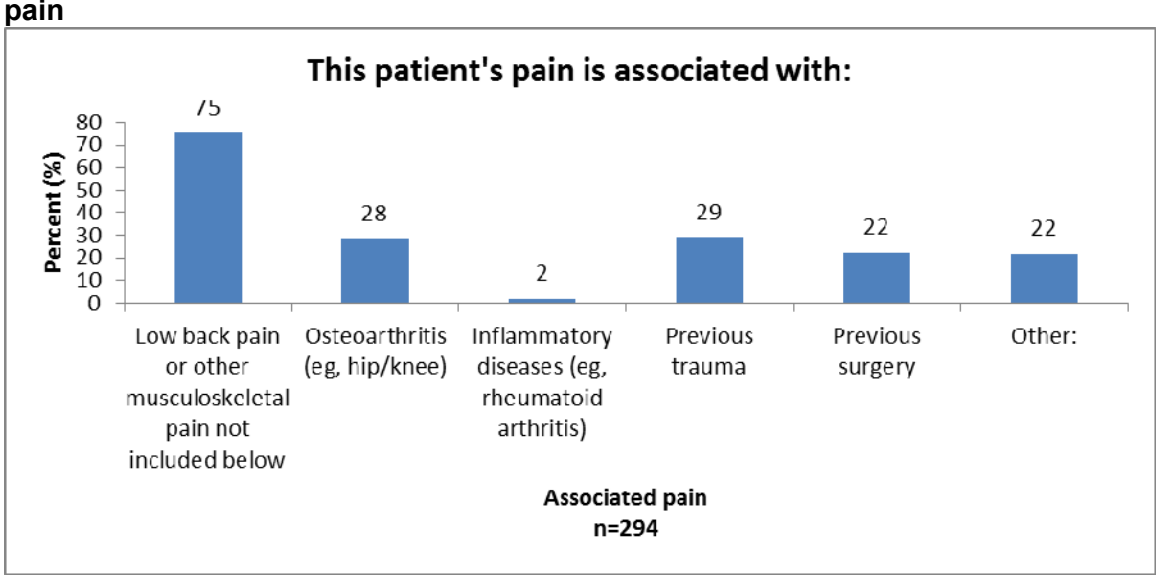


Figure 3. Physician assessments of underlying causes associated with patients' pain



Overall, most patients were treated with pharmacological therapies: short-acting opioids (57%), long-acting opioids (65%), antidepressants (49%), and anticonvulsants (30%). Of those patients without depression as a comorbid condition, 10% were treated with antidepressants and, of these, 80% also used opioids.

Compared with the patient population as a whole, there was little difference in the use of antidepressants and anticonvulsants in mixed pain patients (Table 1). However, patients with mixed pain were more likely than patients without mixed pain to be treated with opioids (Table 2). Combination therapy was also more common: patients with mixed pain were more frequently treated with a combination of opioids and anticonvulsants (31% vs. 23%) or a combination of opioids and antidepressants (52% vs. 43%) than the overall patient population.

Table 1. Use of anticonvulsants and antidepressants in patients with mixed pain

	Anticonvulsants		Antidepressants	
	All patients	Mixed pain patients	All patients	Mixed pain patients
Currently using	29%	32%	49%	52%
Plan to add	4%	5%	6%	6%
Will not add	68%	63%	45%	43%

Table 2. Use of short- and long-acting opioids in patients with mixed pain

	Short-acting opioids		Long-acting opioids	
	Patients without mixed pain	Patients with mixed pain	Patients without mixed pain	Patients with mixed pain
Currently using	52%	59%	56%	71%
Plan to add	4%	1%	15%	11%
Will not add	44%	38%	29%	19%

Current reported use of non-pharmacological treatments in the overall population was low: the most frequently reported was psychotherapy (20% usage rate), followed by rehabilitation (15%), massage therapy (11%) and cognitive-behavioural therapy (10%). Rehabilitation had previously been utilized in 68% of patients and massage therapy in 50%, but previous use of psychotherapy was low (15%). However, mixed pain patients were more likely than patients without mixed pain to have been or currently be treated with non-pharmacological treatments, particularly rehabilitation, massage therapy and acupuncture (Table 3).

Table 3. Use of non-pharmacological treatments in patients with mixed pain

	Patients without mixed pain	Patients with mixed pain
Rehabilitation	Never 27% Past 62% Present 10% Future 2%	Never 15% Past 70% Present 14% Future 1%
Massage therapy	Never 45% Past 45% Present 8% Future 2%	Never 33% Past 54% Present 12% Future 1%
Chiropractic	Never 51% Past 41% Present 7% Future 1%	Never 44% Past 48% Present 6% Future 1%
Acupuncture	Never 72% Past 28% Present 0% Future 0%	Never 54% Past 40% Present 5% Future 1%
Cognitive-behavioural therapy	Never 74% Past 10% Present 13%	Never 77% Past 12% Present 11%

	Future 4%	Future 1%
Psychotherapy	Never 68% Past 15% Present 16% Future 0%	Never 60% Past 15% Present 24% Future 1%

Never = never been treated with this modality; Past = treated with it in the past but discontinued; Present = currently being treated with it; Future = plan to add it

Conclusions

Although the Brief Pain Inventory has been available since 1989,[5] 58% of the physicians in this study used it for pain assessment, while slightly less used the Visual Analogue Scale. Current recommendations suggest using these scales to measure and monitor treatment effectiveness.[2]

Pharmacological therapies were used much more frequently than non-pharmacological ones in this population. In particular, psychotherapy and cognitive-behavioural therapy were seldom used, although other non-pharmacological modalities were used more often in mixed pain patients than in patients without mixed pain.

Although physicians estimated that about a third of their chronic pain patients had mixed nociceptive/neuropathic pain, their assessments of individual patients showed that the true prevalence was nearly twice that. However, the majority of patients were prescribed more than one medication for pain, suggesting that Canadian physicians are treating for a mixed etiology without acknowledging it as such. Combinations of agents appropriate for mixed pain (such as opioids and anticonvulsants) were used more frequently in those patients classified by their physicians as having mixed pain.

Overall, this study highlights potential gaps in Canadian pain management practices:

- non-universal use of validated pain scales despite guideline recommendations
- underestimation of mixed pain despite common use of multimodal analgesia
- limited use of non-pharmacological treatments despite private coverage.

Issues of access, resources and guideline knowledge transfer should be further explored.

References

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