

Regional Anesthesia and Pain

Canadian survey of postsurgical pain and pain medication experiences

[Une enquête canadienne sur la douleur postopératoire et les expériences d'analgésie]

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Purpose: To assess the postoperative pain and pain medication experiences of Canadians.

Methods: Three hundred and five general population subjects from across Canada who had surgery in the previous three years were retrospectively questioned regarding pain experiences in the surgical facility and at home, pain medication efficacy and pain medication satisfaction.

Results: While in the surgical facility, pain was experienced by 68% of patients who expected overnight admission ("inpatients") and 49% of patients who expected same-day discharge ("outpatients"). Overall, 47% of inpatients and 15% of outpatients reported that their highest experience of pain was severe or extreme; 25% of inpatients and 9% of outpatients reported that their average pain was severe or extreme. In the two weeks post-discharge, 79% and 74% respectively of inpatients and outpatients experienced pain. Severe or extreme pain occurred at home in 25% of inpatients and 28% of outpatients; average pain was severe or extreme for 9% of inpatients and 12% of outpatients.

Complete or a lot of pain relief was experienced by 54% to 72% patients who received pain medication; higher rates of pain medication satisfaction were reported than rates of pain relief from pain medication.

Conclusion: Severe or extreme pain was experienced by many surgical patients. Improvements could be made to patients' post-surgical pain experience in Canada, both in the surgical facility and subsequent to discharge.

Objectif: Évaluer la douleur postopératoire et les expériences d'analgésie des Canadiens.

Méthode: Trois cent cinq sujets canadiens opérés au cours des trois années précédentes ont répondu à un questionnaire sur l'expérience

de la douleur à l'unité de chirurgie et à la maison, sur l'efficacité de la médication analgésique et la satisfaction face au traitement.

Résultats : À l'unité chirurgicale, 68 % des patients hospitalisés en attente d'une opération ont éprouvé des douleurs et 49 % des patients externes admis en chirurgie d'un jour. Dans l'ensemble, 47 % des hospitalisés et 15 % des externes ont signalé des douleurs sévères ou extrêmes comme seuil de douleur le plus élevé; 25 % des hospitalisés et 9 % des externes ont rapporté des douleurs, en moyenne, sévères ou extrêmes. Pendant les deux semaines qui ont suivi l'opération, 79 % et 74 % des hospitalisés et des externes ont respectivement eu des douleurs. De retour à la maison, la survenue de douleurs sévères ou extrêmes a été subie par 25 % des hospitalisés et 28 % des externes; en moyenne, les douleurs ont été sévères ou extrêmes chez 9 % des hospitalisés et 12 % des externes. Un soulagement complet ou important a été ressenti par 54 % à 72 % des patients qui ont reçu une analgésie; les taux de satisfaction de la médication étaient plus élevés que les taux de soulagement de la douleur par la médication.

Conclusion : De nombreux patients de chirurgie subissent des douleurs sévères ou extrêmes. On peut améliorer l'analgésie postchirurgicale des patients canadiens, qu'ils soient à l'unité de chirurgie ou de retour à la maison.

THE significance of pain incidence and treatment has risen over the past decade, such that pain is now considered the fifth vital sign. Recognizing the widespread under-treatment of pain, the Agency for Health Care Policy and Research issued guidelines for acute pain management in 1992.¹ This document was followed by American guidelines for anesthesiologists and the

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American Pain Society's quality improvement guidelines.^{2,3} In response to undertreatment of pain, in May 2001 the Canadian Pain Society issued a "Patient Pain Manifesto", a public awareness and education program regarding rights to pain management.⁴

Practice patterns do not always evolve, despite adequate guidelines and/or accreditation requirements. In 1995, Warfield *et al.* conducted a national survey in the US and reported a high incidence and severity of postoperative pain; of the 77% of patients who reported pain, 80% rated postsurgical pain as moderate to extreme.⁵ A recent US survey reported 82% of patients who experienced pain had moderate to extreme pain.⁶ Moreover, outpatient surgery patients reported more pain after discharge than before discharge; this is worrisome due to the unsupervised nature of their home recovery. Similar general population surveys of postsurgical pain have not been reported in a Canadian setting.

The objective of this study was to assess the recent postoperative pain and pain medication experiences of Canadians.

Methodology

A questionnaire was adapted from the American Pain Society guidelines and previously published general population pain surveys.^{3,5,6} The adaptation was not independently validated. Two time periods were included: while in the surgical facility and the two weeks post-discharge. The instrument questioned participants regarding retrospective pain experiences (highest and average pain), pain medication (efficacy and satisfaction) and demographics.

General population subjects were eligible for the study if they had surgery in the past three years (excluding dental surgery). Subjects participating in three consecutive Omnibus surveys were questioned regarding eligibility and interest. The Omnibus survey is a weekly 1,000 sample general population survey conducted by Canada's largest public-opinion research firm. Eligible and interested Omnibus subjects were contacted within one week and administered the questionnaire by telephone. The intended sample size was 300, corresponding to sample sizes from previous surveys.^{5,6}

Analyses were conducted on a descriptive basis only.

Results

Recruitment

Subjects from three consecutive weekly surveys were questioned regarding their eligibility for this survey ($n = 3,004$). There were 879 eligible subjects (29.3% of the original sample). Of these, 480 subjects agreed to participate in the pain survey (55% of the eligible sam-

TABLE I Demographics

Characteristic	Inpatient <i>n</i> = 136	Outpatient <i>n</i> = 168	Canadian population <i>n</i> = 30,750,087
<i>Gender</i>			
Male	68 (50%)	84 (50%)	49.5%
Female	68 (50%)	84 (50%)	50.5%
<i>Age</i>			
18–24	19 (14%)	15 (9%)	13.8%
25–34	20 (15%)	33 (20%)	18.3%
35–44	29 (21%)	41 (24%)	22.1%
45–54	22 (16%)	44 (26%)	18.2%
55–64	27 (20%)	23 (14%)	11.7%
66–74	12 (9%)	10 (6%)	8.9%
75+	6 (4%)	2 (1%)	7.1%
Not stated	1 (1%)	15 (9%)	
<i>Timing of surgery</i>			
Past 6 months	30 (22%)	67 (40%)	
6 months–1 yr	36 (26%)	49 (29%)	
1 yr–2 yr	44 (32%)	35 (21%)	
2 yr–3 yr	26 (19%)	17 (10%)	

ple); 305 interviews were conducted during May/June 2001 to meet the desired sample size of 300 patients.

Patient characteristics

Patient characteristics are reported in Table I. Compared to the Canadian general population, ages 55–64 were over-represented and those 75 and over were under-represented. Outpatient surgery subjects (those who were expected to go home on the day of surgery) were slightly younger than inpatient subjects (those who were expected to stay overnight), and more likely to have had surgery recently. Overall, 60% of all subjects had their surgery in the past year. One patient could not provide inpatient/outpatient status and was excluded from subgroup analyses.

Pain experiences

While in the surgical facility, inpatients reported more frequent and more severe pain experiences. Specifically, 47% of inpatients and 15% of outpatients reported that their highest experience of pain was severe or extreme (Figure 1). The average experience of pain was severe or extreme for 25% of inpatients and 9% of outpatients.

In the two weeks post-discharge, 79% of inpatient surgery subjects and 74% of outpatient surgery subjects reported pain. The proportion who reported severe or extreme for highest experience of pain decreased to 25% for inpatients but rose to 28% for outpatients (Figure 2). Severe or extreme average pain levels were reported by 9% of inpatients and 12% of outpatients.

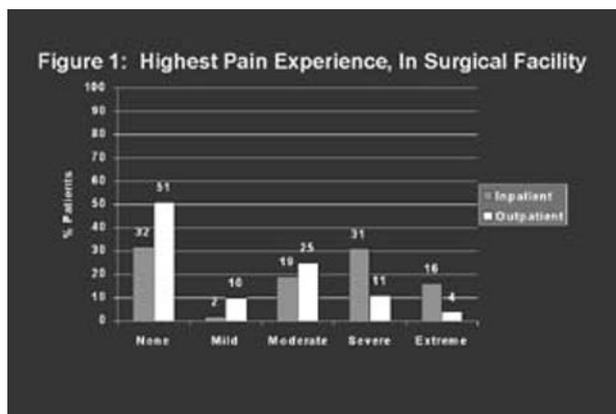


FIGURE 1 Highest pain experience, in surgical facility.

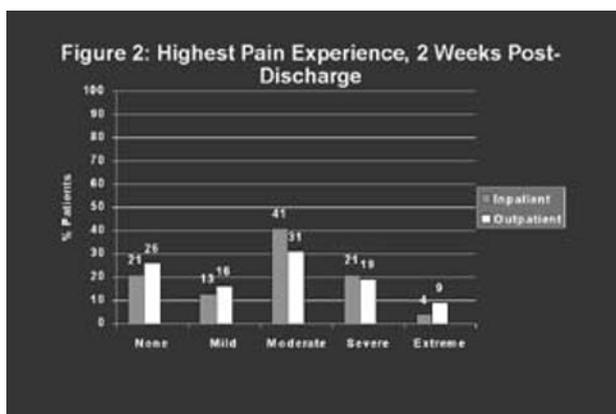


FIGURE 2 Highest pain experience, 2 weeks post-discharge.

Pain medication experiences

Almost all inpatients recalled receiving pain medication while in the surgical facility (93%), while only 60% of outpatients recalled receiving pain medication while in the surgical facility. Many patients who received pain medication reported complete or a lot of pain relief from medication while in the surgical facility (65% of inpatients and 72% of outpatients who took pain medication); however, 90% of inpatients and 97% of outpatients were satisfied with their pain medication while in the surgical facility (Table II).

Seventy-six percent of inpatient surgical subjects and 74% of outpatient surgical subjects took pain medication post-discharge. When at home, 54% of inpatients and 63% of outpatients who took pain medication reported complete or a lot of relief from pain medication; 89% of inpatients and 91% of outpatients were satisfied with pain medication (Table II).

Discussion

Pain was experienced by many surgery patients at an unacceptable frequency and severity. The results are similar to those reported in American general population surveys of postsurgical pain^{5,6} and with those of other Canadian researchers who found 25 to 40% of day surgery patients experienced moderate to severe pain in the 24 hr after discharge.^{7,8}

Despite incomplete pain relief, patients reported satisfaction with pain medication. This has been a common finding in analgesia research.^{9,10} Pain medication satisfaction is multifactorial. Beyond analgesic efficacy, satisfaction can be affected by patient education and expectations, overall provider care, and relief at the resolution of the primary medical condition.

TABLE II Pain medication: efficacy and satisfaction

Characteristic	Inpatient		Outpatient	
	in surgical facility (n = 127)	2 weeks post-discharge (n = 103)	in surgical facility (n = 101)	2 weeks post-discharge (n = 125)
<i>Efficacy</i>				
Complete pain relief	33 (26%)	17 (17%)	31 (31%)	27 (22%)
A lot of pain relief	49 (39%)	38 (37%)	41 (41%)	51 (41%)
Some pain relief	32 (25%)	40 (39%)	22 (22%)	38 (30%)
A little pain relief	9 (7%)	7 (7%)	4 (4%)	5 (4%)
No pain relief	4 (3%)	1 (1%)	2 (2%)	3 (2%)
Don't know/not stated	0 (0%)	0 (0%)	1 (1%)	1 (1%)
<i>Satisfaction</i>				
Very satisfied	82 (65%)	47 (46%)	74 (73%)	76 (61%)
Somewhat satisfied	32 (25%)	44 (43%)	24 (24%)	38 (30%)
Somewhat dissatisfied	6 (5%)	7 (7%)	1 (1%)	6 (5%)
Very dissatisfied	5 (4%)	4 (4%)	1 (1%)	5 (4%)
Don't know/not stated	2 (2%)	1 (1%)	1 (1%)	0 (0%)

The primary limitations of this study were the small sample size, retrospective design and potential for recall bias. Future research using prospective data collection could avoid recall bias and also permit more detailed data collection, for example the type and dose of medications administered.

A strength of this study was its broad generalizability, since it was based on the Canadian general population with almost no exclusion criteria. However, subjects over age 75 may have been under-represented.

In conclusion, postoperative pain continues to occur at frequencies and severities to warrant concern. Patients continue to report greater satisfaction with pain medications than pain relief. Improvements could be made to patients' postsurgical pain experience in Canada.

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