Pain Medicine Workforce: Cross-Sectional Analysis of Training, Specialty, and Practice Patterns in Canada's Most Populous Province

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What constitutes Ontario's Pain Medicine workforce?

A linked examination of workforce identity, clinical origins, pain-specific training, examination participation, practice setting, and predominant treatment approach

WHY THIS STUDY

Ontario's Pain Medicine workforce spans multiple foundational specialties, additional training routes, and practice environments. No single provincial source links physician identity with specialty and subspecialty designation, Pain Medicine training, Royal College examination participation, care setting, and model of practice. Building this linked profile can improve referral navigation, support workforce and education planning, clarify available expertise for clinicians and patients, and provide a defensible foundation for future resource allocation.

OBJECTIVE

To construct a province-wide, physician-level profile of Ontario's identifiable Pain Medicine workforce using systematic service mapping, linked public and regulatory records, institutional confirmation, and structured physician reporting. By connecting clinical background, pain-specific training, Royal College examination participation, practice setting, and predominant treatment approach, the profile aims to make available expertise more visible to clinicians and patients and provide an evidence base for referral pathways, professional education, workforce planning, health-system policy, and future resource allocation.

STUDY DESIGN

Cross-sectional, mixed-methods workforce study conducted from March to August 2026

PHASE 1 MULTI-SOURCE WORKFORCE ASCERTAINMENT AND REGISTRY LINKAGE

Community clinics were identified through the College of Physicians and Surgeons of Ontario (CPSO) Out-of-Hospital Premises registry, while hospital and academic pain services were identified through institutional websites and public directories. Physicians entered the roster when they were listed as members of a pain service, named as treating physicians by an identified pain clinic, or explicitly described as providing pain-focused care. CPSO records confirmed identity, registration, and specialty designation. Records were reconciled and de-duplicated across sources. Within hospital and academic services, public information was supplemented by program-level information supplied through established institutional training and clinical networks.

PHASE 2 PHYSICIAN VERIFICATION AND PRACTICE CHARACTERIZATION

The individualized electronic questionnaire provides standardized physician-level confirmation across the roster, particularly where comparable information cannot be established through public or institutional sources. It captures primary clinical training background, pain-specific training by pathway, setting, duration and completion year, Royal College examination participation, and the predominant treatment approach within current practice. Responses link to Phase 1 records for physician-level descriptive analysis.

ANALYTIC STRUCTURE

Primary clinical training background was analyzed separately from subsequent subspecialty designation and pain-specific training. Current physician counts describe the identifiable roster rather than a complete provincial census.

WORKFORCE ASCERTAINMENT AND PUBLIC VISIBILITY

Which physicians can be identified as practising Pain Medicine in Ontario, and where do existing information systems leave the workforce incompletely documented?

VARIABLES AND SOURCES

Active CPSO registration and explicit evidence of pain-focused practice: membership on a hospital or academic pain-service roster, identification as a treating physician by a pain clinic, or an explicit description of pain-focused practice on a physician or clinic webpage. CPSO records, institutional rosters, public directories, clinic webpages, and program-level information are reconciled at the physician level.

WHAT THIS CLARIFIES

Defines the identifiable roster and shows how incomplete public information may limit provincial enumeration.

THERAPEUTIC CONFIGURATION OF CURRENT PRACTICE

Which predominant treatment approaches characterize physicians' current Pain Medicine practices, and how are medication-based, interventional or procedural, and psychological or mental-health-focused approaches combined?

VARIABLES AND SOURCES

One physician-reported best-fit category: primarily medication-based management, primarily interventional or procedural Pain Medicine, primarily psychological, psychiatric, or mental-health-focused care, one of the three possible two-domain combinations, or broad multimodal practice involving all three domains.

WHAT THIS CLARIFIES

Distinguishes modality-focused, combined, and broad multimodal practice patterns and shows how Pain Medicine care is configured within the identified workforce.

ORGANIZATION ACROSS PRACTICE SETTINGS

How is the identifiable workforce organized across hospital or academic pain services, community clinics, and practice spanning both settings?

VARIABLES AND SOURCES

Physician-to-service affiliations derived from hospital and academic rosters, institutional webpages, community clinic listings, public directories, program-level information, and cross-setting record linkage. Affiliations are classified as community only, hospital or academic only, or both.

WHAT THIS CLARIFIES

Defines the respective and overlapping contributions of hospital-based and community-based practice to Ontario's Pain Medicine workforce.



CLINICAL ORIGINS OF THE WORKFORCE

From which primary clinical training backgrounds does Ontario's Pain Medicine workforce emerge, and which subsequent subspecialty designations are represented?

VARIABLES AND SOURCES

Primary clinical training background, with up to two selections: Family Medicine, Anesthesiology, Physical Medicine and Rehabilitation, Neurology, Psychiatry, Neurosurgery, Orthopedic Surgery, Internal Medicine, Emergency Medicine, or another specified field. CPSO records and institutional profiles provide documented specialty and subspecialty information, supplemented by physician confirmation.

WHAT THIS CLARIFIES

Maps the clinical routes through which physicians enter Pain Medicine and characterizes the breadth of disciplines represented within the identifiable workforce.

PATHWAYS OF PAIN-SPECIFIC TRAINING

Following primary residency, what structured Pain Medicine training have physicians completed, and how do those pathways differ in format, institutional setting, duration, and timing?

VARIABLES AND SOURCES

Whether additional structured training was completed and whether it consisted of a formal Pain Medicine residency or fellowship at a university-affiliated academic centre, courses, workshops or continuing professional development, supervised clinical training or mentorship with a physician practising Pain Medicine, or another specified pathway. Total duration is recorded as less than 6 months, 6–11 months, 12–23 months, or at least 24 months, together with the year of completion.

WHAT THIS CLARIFIES

Characterizes how physicians developed pain-specific expertise beyond primary residency and permits comparison of formal academic programs, supervised clinical learning, shorter educational routes, and their duration and timing.

ROYAL COLLEGE EXAMINATION PARTICIPATION

How is participation in the Royal College examination in Pain Medicine represented among physicians with different clinical and training backgrounds?

VARIABLES AND SOURCES

Physician response to whether the examination has been taken, recorded as yes, no, or not applicable because of eligibility requirements. Responses are considered alongside primary clinical training and pain-specific training.

WHAT THIS CLARIFIES

Describes engagement with the formal examination pathway and how participation varies across the clinical and educational routes represented within the workforce.

CURRENT EVIDENCE

Facility mapping and current public and institutional source linkage

FACILITY MAPPING	n	%
All identified facilities (N = 167)		
Hospital or academic	32	19.2
Community	135	80.8
Community clinics (N = 135)		
Active	98	72.6
Inactive or no longer providing pain services	37	27.4
Active community clinics (N = 98)		
Physician information publicly available	42	42.9
Physician information not publicly available	56	57.1

Publicly available physician information does not imply that a clinic's physician listing is complete.

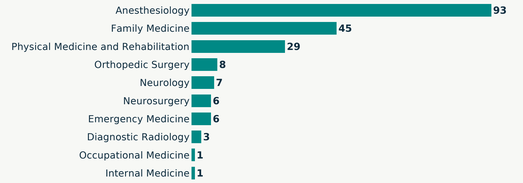
PHYSICIAN-LEVEL RECORD LINKAGE

After within-setting de-duplication, 151 physicians were identified through community sources and 57 through hospital or academic sources. Nine appeared in both groups, yielding 199 unique physicians.

OBSERVED PRACTICE AFFILIATION (N = 199)	n
Community only	142
Hospital or academic only	48
Both settings	9
Unique physicians identified	**199**

FOUNDATIONAL SPECIALTY AMONG 199 IDENTIFIED PHYSICIANS

Each physician was assigned one base specialty based on documented residency training and CPSO records.



Anesthesiology is the most frequently represented foundational specialty in the identified roster. This distribution may reflect differences in visibility across practice settings. Family physicians whose pain-focused practice is embedded within general community care may be less readily identifiable in public sources. The chart therefore describes the observed roster rather than the complete provincial workforce.

INTEGRATED WORKFORCE PORTRAIT

Linked at the physician level, six domains connect workforce identity, clinical origins, pain-specific training, examination participation, practice setting, and predominant treatment approach into one coherent provincial workforce portrait.

References 1. Morley-Forster P. Can J Anesth. 2014;61:188–194. 2. Pritzlaff SG, et al. Pain Pract. 2025;25:e13441.

Ethics Research Ethics Board review was not required. No patient information was collected.

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