



# Advanced Practice Physiotherapy in Canada: Past Lessons, Present Successes and Future Innovations

François Desmeules, PhD, PT, OPPQ fellow  
Head of Graduate APP Programs  
Full Professor, School of Rehabilitation  
University of Montréal

Researcher, Centre de recherche de l'Hôpital  
Maisonneuve-Rosemont, Montreal, Québec,  
Canada



Université  de Montréal et du monde.

## Advanced physical therapy practice

Policy statement

© World Physiotherapy 2019  
www.world.physio



Is a higher level of practice, functions, responsibilities, activities and capabilities

- Often associated with an occupational title
- Requires a combination of advanced competencies and distinctly increased clinical and analytical skills
- Applies advanced level skills and knowledge to influence service improvement
- Results in the responsibility for the delivery of care to patients/clients commonly with complex needs

Some countries will refer to four pillars : clinical practice, leadership and management, education, and research

APP is not associated with direct access or self-referral

# Advanced Practice Physiotherapy

## Models of care

- 1- PT is positioned in a model of care where it "replaces" MD as the gatekeeper
- 2- Level of responsibility is increased
- 3- Role includes more systematically patient orientation and recommendation of medical acts (medications, imaging, etc.)
- 4- Additional level of risk- more complex differential Dx
  - Higher prevalence of serious pathologies
  - Triage of surgical candidates
- 5- Rehabilitation interventions to patients include self-management, education and exercises
  - Otherwise, patients are referred to *traditional PT*
- 6- Patient initially presents to see a MD

# Terminology is still confusing

Often more than one title used within same country

Entry to  
Practice

Clinical  
Specialist

Advanced  
Practice

Canada,  
Australia, NZ,  
Ireland

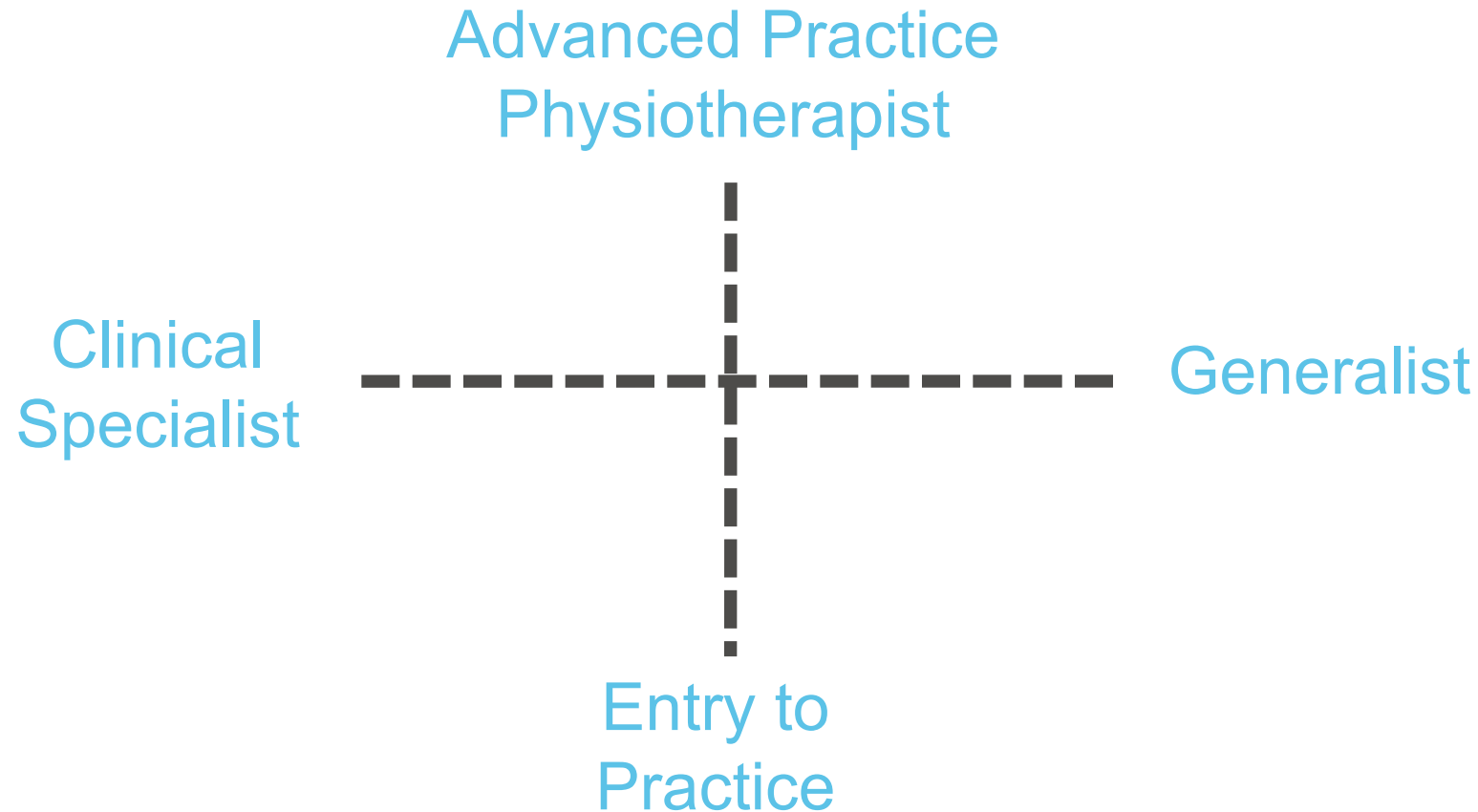
Entry to  
Practice

Advanced  
Practice

Extended  
Scope  
Practitioner/  
Consultant

United States,  
UK

# APP is not specialization



## Advanced practice in physiotherapy: a global survey

Andrews K Tawiah <sup>1</sup>, François Desmeules <sup>2</sup>, Laura Finucane <sup>3</sup>, Jeremy Lewis <sup>4</sup>,  
Marguerite Wieler <sup>1</sup>, Emma Stokes <sup>5</sup>, Linda J Woodhouse <sup>6</sup>

Affiliations + expand

PMID: 34794584 DOI: [10.1016/j.physio.2021.01.001](https://doi.org/10.1016/j.physio.2021.01.001)

- 58% of respondents said there was direct access in their country
- 14 Countries report having APP (17%):
  - Australia, Canada, Hong Kong, Ireland, Israel, Jordan, New Zealand, Norway, Peru, Switzerland, Taiwan, Trinidad and Tobago, United Kingdom and United States
  - **Denmark- France**
- Majority of high-income countries with public health care systems
- Confusion with specialist roles
- Eight national associations have developed policy guidelines on APP
  - Australia, Israel, New Zealand, Norway, Switzerland, Taiwan, United Kingdom and United States

# APP World Physio Survey

## Professional development and education required

- Majority of Associations report:
  - no defined education pathway
  - APP has to demonstrate a set of defined competencies
  - Most APP clinicians have a combination of clinical practice and a Master's/Doctoral degree
- Only half of associations report :
  - APP clinicians must have postgraduate qualifications

# Western healthcare systems issues

- Often fragile and underfunded
- Difficult access to care
- Medico-centric and siloed
- Crisis management drives changes
- Integrated management is often deficient
- Poorly defined care pathways
  - From primary care to referral to specialized care
- Prevention is lacking





# MSK care quality is problematic

- Represent a significant proportion of medical consultations (emergency and family medicine)
- Primary care physician training is limited and focused on the exclusion of severe pathologies
  - Musculoskeletal clinical examination skills are poor
  - Initial diagnosis is inadequate or incomplete
  - Over-prescription of imaging and medication, including opioids
  - Not enough referrals to physiotherapy
  - Too often referred to a specialist physician

## Review

What does best practice care for musculoskeletal pain look like? Eleven consistent recommendations from high-quality clinical practice guidelines: systematic review

Ivan Lin <sup>1</sup>, Louise Wiles,<sup>2</sup> Rob Waller,<sup>3</sup> Roger Goucke,<sup>4</sup> Yusuf Nagree,<sup>5,6</sup> Michael Gibberd,<sup>7</sup> Leon Straker <sup>8</sup>, Chris G Maher,<sup>9</sup> Peter P B O'Sullivan<sup>10</sup>

# Evidence support MSK APP care



Physiotherapy 113 (2021) 116–130

Physiotherapy

Systematic review

## Advanced practice physiotherapists are effective in the management of musculoskeletal disorders: a systematic review of systematic reviews



Mario Vedanayagam, Martina Buzak, Duncan Reid\*, Nicola Saywell

*Department of Physiotherapy, School of Clinical Sciences, Faculty of Health and Environmental Sciences AUT University, PO Box 92006, Auckland 1142, New Zealand*

# Evidence support MSK APP care

- The physiotherapist is competent:
  - Musculoskeletal diagnosis and identification of red flags
  - Patient-centered care
  - Functional assessment
  - Evaluation of bio-psycho-social factors
  - Shared decision-making
  - Patient education on pain and pathology
  - Exercise prescription



Physiotherapy 113 (2021) 116–130



Systematic review

**Advanced practice physiotherapists are effective in the management of musculoskeletal disorders: a systematic review of systematic reviews**



Mario Vedanayagam, Martina Buzak, Duncan Reid\*, Nicola Saywell

*Department of Physiotherapy, School of Clinical Sciences, Faculty of Health and Environmental Sciences AUT University, PO Box 92006, Auckland 1142, New Zealand*

Systematic review

Advanced practice physiotherapists are effective in the management of musculoskeletal disorders: a systematic review of systematic reviews



Mario Vedanayagam, Martina Buzak, Duncan Reid\*, Nicola Saywell

Department of Physiotherapy, School of Clinical Sciences, Faculty of Health and Environmental Sciences AUT University, PO Box 92006, Auckland 1142, New Zealand

## Abstract

**Background** There are increasing demands for orthopaedic specialist services due to the increasing burden of musculoskeletal (MSK) disorders. This situation creates a barrier for patients to access appropriate health care. Advanced practitioner physiotherapists (APP) may provide an alternative service for patients with MSK disorders.

**Objective** To evaluate the evidence on whether APPs are accurate at diagnosis, can triage appropriately and improve patient treatment outcomes and access to care for patients with musculoskeletal disorders.

**Data sources** CINAHL, MEDline, Web of Science, SPORTdiscus, SCOPUS and AMED between January 2000 and March 2020.

**Study selection** Systematic reviews evaluating the efficacy of APPs in any healthcare setting, treating patients of any age range with MSK disorders, in comparison to orthopaedic surgeons or doctors.

**Data extraction and synthesis** Two researchers independently extracted and synthesised data according to the inclusion and exclusion criteria. Methodological quality was independently assessed by two reviewers using the AMSTAR tool. A third reviewer resolved discrepancies.

**Results** Thirteen systematic reviews met the inclusion criteria. The evidence consistently found APPs are accurate at diagnosis, can triage appropriately, and improve patient treatment outcomes and access to care. There was a lack of high-quality primary studies in the included reviews, however, the highest quality studies had similar findings.

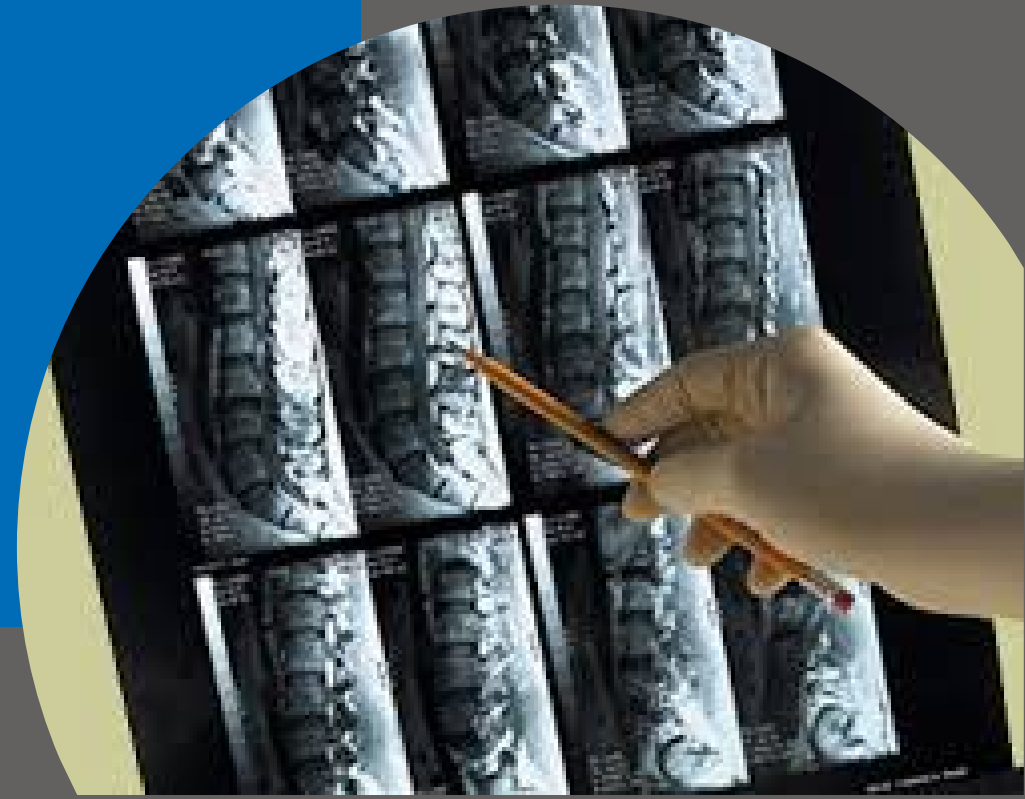
**Limitations** A meta-analysis was not possible due to heterogeneity of outcome measures. There was an overlap of primary studies which may cause bias.

**Conclusion** The evidence of varying quality consistently shows that APPs can accurately diagnose, appropriately triage and effectively manage patients with musculoskeletal disorders in various clinical settings.

© 2021 Chartered Society of Physiotherapy. Published by Elsevier Ltd. All rights reserved.

# Canadian Health Care System

- Public system with very little private components
- Health Care is mainly a provincial competence
  - 10 provinces and 3 territories
    - Ontario and Québec largest
  - Provincial and territorial differences
    - Health services organization
    - Funding
    - Physicians and health professionals' remuneration



# Physiotherapy in Canada

- Majority of physiotherapists work in private clinics
  - Direct access
  - Only 50% of Canadians have private insurance
  - Underprivileged Canadians have little access
- Physiotherapy is also present in hospitals and rehabilitation centers
  - No direct access
- Few PTs work in public primary care settings
  - But growing rapidly – including in APP roles



# Why was APP developed in Canada ?

- APP introduced to address wait times and access
  - First models in the 90's at the local level
  - Specialized medical care
- Early challenges
  - Regulatory barriers
  - Physician resistance
  - Funding issues
- Lessons learned
  - Importance of inter-professional collaboration (clinical and organisational/managing levels)
  - Data-driven advocacy
  - Training required
    - Although informal ( experience and residency type )

# Why APP is being developed in Canada ?

- Rising healthcare costs and physician shortage → healthcare transformations
- Aging of population and increase prevalence of chronic disorders
- New models of care that often involve the extension of the scope of practice for allied health professionals
  - Nurse practitioners, pharmacists, nutritionists, optometrists
- Indirect and specific evidence show benefits
  - Offer in some instances better care aligned with evidence-based recommendations for MSK care



# What is APP in Canada ?

Practice at the top of the regulated professional scope or outside scope

## ORIGINAL RESEARCH

### Advanced Practice Physiotherapy in Canada: A Survey of Canadian Physiotherapists

*Eveline Matifat, PT, MSc; Diana Zidarov, PT, PhD; Linda Woodhouse, PT, PhD; Francois Desmeules, PT, PhD, OPPQ fellow*

Physiotherapy Canada



- Medical Diagnosis
- Ordering and interpreting diagnostic imaging (X-rays, MRIs, ultrasounds)
- Ordering and interpreting laboratory tests (e.g., rheumatology)
- Directly referring patients to specialists (e.g., orthopaedic surgeons, rheumatologists)
- In many provinces APPs are able to work under local medical directives
  - No standardization of medical delegated acts
  - Individual level
- In some provinces, regulatory bylaws have now or soon will be allowing ALL PTs to prescribed imaging and/or laboratory tests
  - Quebec, Alberta and Ontario

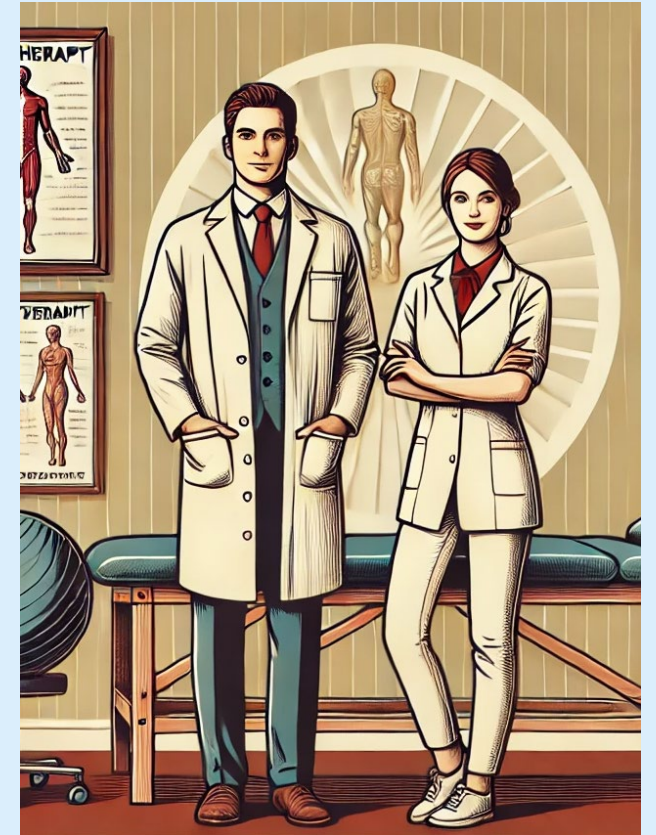


# What is APP in Canada ?

## Models of Care and Roles

### Roles include:

- First-contact provider
- Clinical assessment and diagnosis
  - Dx tests
- Triage for surgical vs. non-surgical candidate
- Care leader and deciding on treatment plan
  - Physiotherapy interventions
  - Medical intervention ( medication prescription)
- Education and mentorship of healthcare providers
- Policy advocacy and healthcare organisation



# What is APP in Canada ?

## Provincial Regulations & Recognition

- Not all provinces allow APP and medical delegations
- Not a recognized title
- Increasingly recognized as a specific role by professional associations
- Autonomy varies
- Local initiatives are common and now system wide implementation is growing
  - MSK clinics , joint assessment and rapid access clinics
  - But heterogenous



# What is APP in Canada ?

## Training & Certification

- No official certification
- But growing understanding of the higher level of practice required
- Often still offered in local settings with residency and shadowing types of training with physicians



# What is APP in Canada ?

## Training & Certification

- Three graduate university programs
  - University of Montreal
  - University of Toronto
    - ACAPAC Rheumatology program
    - PT and OT
  - Western University (London, Ontario)
    - MSK care including APP training



# What is APP in Canada ?

## Training & Certification at the University of Montreal

Graduate Diploma (DEPA) in Advanced Practice Physiotherapy (30 credits) 2-year part-time

- Advanced training for physiotherapists in primary care, emergency departments and MSK medical specialist care.
- Focus on assessment, differential Dx and overall MSK care (medical and physio) to improve patient access and collaboration with doctors.
  - Imaging, medication, surgical indications
  - Patient education, shared decision making and motivational behavioral interview approaches
- Basic implementation science and outcome evaluation
- Includes theory, clinical training and competency evaluations
- End-of-diploma residency and/or implementation of an APP model of care

Microprogram in Advanced Practice Physiotherapy (15 credits)

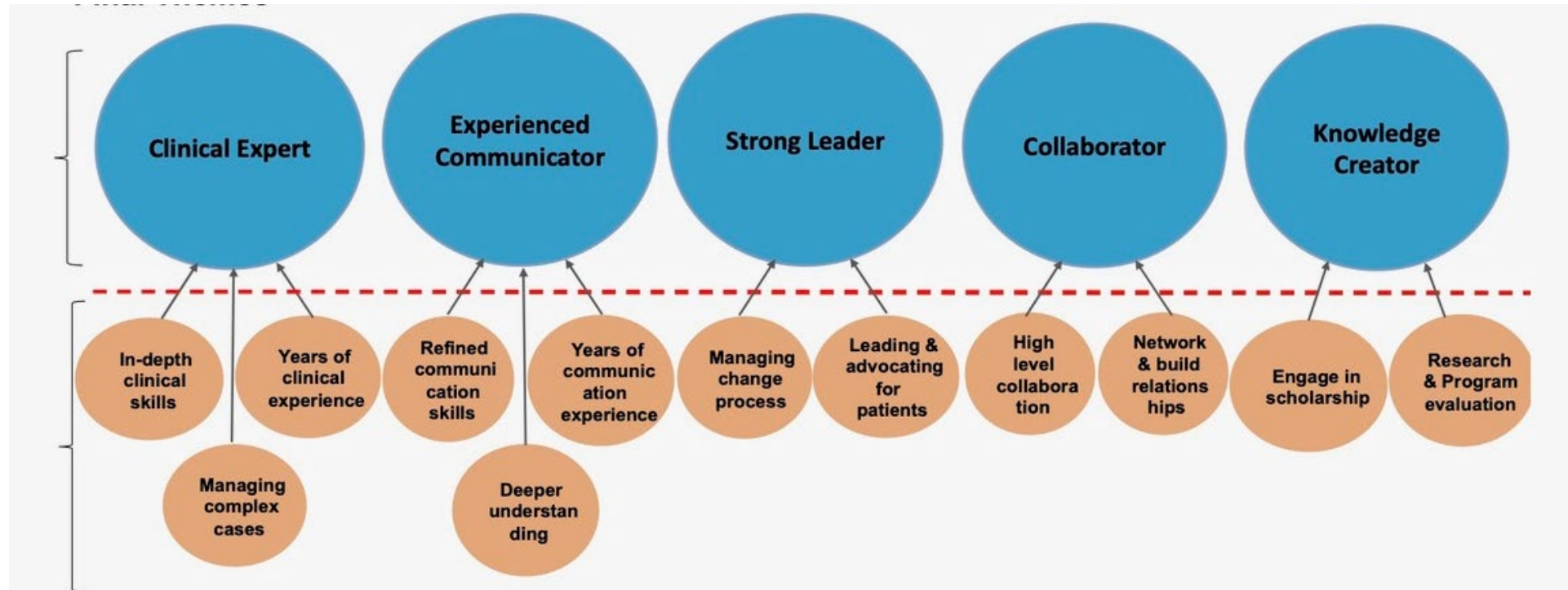
- A shorter more flexible option



Since 2020  
About 70 graduates

## Developing a core competency and capability framework for advanced practice physiotherapy: A qualitative study

Andrews K. Tawiah, Emma Stokes, Marguerite Wieler, François Desmeules, Laura Finucane, Jeremy Lewis, Jonathan Warren, Katie London, Tim Noblet, Caitriona Cunningham & Linda J. Woodhouse





# APP Barriers and Facilitators

## ORIGINAL RESEARCH

### Advanced Practice Physiotherapy in Canada: A Survey of Canadian Physiotherapists

*Eveline Matifat, PT, MSc;<sup>†</sup> Diana Zidarov, PT, PhD;<sup>‡</sup> Linda Woodhouse, PT, PhD;<sup>‡</sup> Francois Desmeules, PT, PhD, OPPQ fellow<sup>†</sup>*

Physiotherapy Canada



#### Facilitators\*

6-points Likert scale

Positive perceptions of medical staff of APP role



Administrative support

Model of care funding

Need to improve management of waiting lists



Need to improve clinical flow or process

Evidence supporting APP roles



Regulation of the profession

Positive perceptions of patients of APP role



Increased efficiency of care



Reduction of health care costs

#### Barriers†

6-points Likert scale

Negative perceptions of medical staff of APP role

Administrative support

Model of care funding



Regulation of the profession



Negative perceptions of patients of APP role

Patients rather see a physician

# Who drives APP development in Canada ?

- No federal and little - but growing provincial governments actions to support the development of APP and other health professional professions to optimize/expand their scope
- Support from :
  - Physician specialists' associations ( Rheumatologists and Orthopaedic Surgeons )
  - Universities
  - Researchers
- Clinicians PTs and MDs at the local levels
- Canadian Physiotherapy Association and provincial branches

# Who drives APP development in Canada ?

- But no official support from:
  - Primary Care Physician Associations (Family or ED physicians)
  - Nursing Associations
- Growing but limited knowledge and support from the public
- Regulatory bodies are slowly considering APP

## The Acceptability of Physiotherapy Care in Emergency Departments: An Exploratory Survey of Emergency Department Physicians

Eveline Matifat, PT, MSc<sup>a</sup>, Pascale Lavoie-Côté, PT, MSc<sup>b</sup>  
Nabila Kounda, PT, MSc<sup>b</sup>, Lorie Charrier, PT, MSc<sup>b</sup>,  
Kadja Perreault, PT, PhD<sup>c,d</sup>, François Desmeules, PT, PhD<sup>a,b</sup>

# Acceptability of ED MDs (N=91)

**Table 3: Perceptions of the acceptability of advanced practice physiotherapy care in emergency departments (n = 91)\***

Questions	Collected data % (n)	Recategorized data for analyses (if applicable) % (n)
Confidence that an advanced practice physiotherapist could appropriately and autonomously diagnose and treat patients with MSKD	Extremely confident 19.8 (18) Very confident 41.7 (38) Moderately confident 26.4 (24) A little confident 7.7 (7) Not at all confident 3.3 (3) I don't know 1.1 (1)	Extremely, very, or moderately confident: <b>88.8%</b> (80) Little or not confident: 11.0 (10)
Confidence that the advanced practice physiotherapist would appropriately refer back to a physician any patient needing medical care	Extremely confident 16.5 (15) Very confident 45.0 (41) Moderately confident 29.7 (27) A little confident 4.4 (4) Not at all confident 3.3 (3) I don't know 1.1 (1)	Extremely, very, or moderately confident: <b>91%</b> (82) Little or not confident: 7.7 (7)

**Welcome Ovid Subscriber!**  
Your institution's Ovid subscription entitles you to view the full text of articles on the Journal of Acute Care Physical Therapy journal website.

**Article Level Metrics**

There is no Altmetric data at this time...

**Related Links**

- Articles in PubMed by Amélie Béland
- Articles in Google Scholar by Amélie Béland
- Other articles in this journal by Amélie Béland

**ORIGINAL STUDY: PDF ONLY**

**Acceptability of Physiotherapists in the Emergency Department for the Care of Adults With Musculoskeletal Disorders: An Exploratory Survey of Patients' Perspective**

Béland, Amélie, Matifet, Eveline, Cournoyer, Emie, Perreault, Kadja, Desmeules, François

Author Information

Journal of Acute Care Physical Therapy: July 16, 2021 - Volume - Issue - doi: 10.1097/JAT.0000000000000178

# Patients seeking MSK Care in one ED (N=41)

**TABLE 3. Level of Confidence Regarding Advanced Practice Physiotherapists in EDs (n = 41)**

Questions	Extremely Confident n (%)	Very Confident n (%)	Moderately Confident (%)	A Little Confident n (%)	Not at All Confident n (%)	I do not Know n (%)
To determine your diagnosis if you were presenting to the ED with an MSKD?	6 (14.6)	17 (41.5)	7 (17.1)	1 (2.4)	2 (4.9)	8 (19.5)
To refer you to an ED physician if required by your health condition?	5 (12.2)	14 (34.1)	4 (9.8)	1 (2.4)	1 (2.4)	3 (7.3)
To prescribe radiological tests if deemed necessary to evaluate your condition?	10 (24.4)	20 (48.8)	7 (17.1)	0 (0)	1 (2.4)	3 (7.3)
To prescribe certain prescription drugs like anti-inflammatory medication if necessary?	7 (17.1)	20 (48.8)	4 (9.8)	3 (7.3)	2 (4.9)	5 (12.2)

*ED, emergency department; MSKD, musculoskeletal disorder.*

75% to 90% are confident  
But 20% don't know

## Patients presenting with musculoskeletal disorders in the emergency department: A qualitative study of their experiences when cared by advanced practice physiotherapists in the province of Québec

Juliette Blondin<sup>1,2</sup> | François Desmeules<sup>1,2</sup> | Eveline Matifat<sup>1,2</sup> | Amélie Kechichian<sup>1,3</sup>

# Patients' experience - Qualitative analysis (n=11)

Patients had a positive care experience and are highly satisfied with the care received

"The physiotherapist was really good, she really listened to my problem."

"I believe it's one of the times I don't have anything to say about my visit to the emergency room."

Patients perceived PPAs as competent first-contact healthcare providers in the emergency department.

"They give great advices, perhaps even better ones than a physician who sees a bit of everything."

"Even if it's responsibilities that physiotherapist didn't have before, [...] they can manage all that. [...] A great progress for Quebec."

Patients are in favor of the implementation of this new model of care and find it beneficial.

"(...) it can somehow reduce physician's workload and maybe reduce waiting times in the emergency room."

"(...) medication, I'd prefer to have it prescribed by a physician, or [...] that the physiotherapist suggestion be validated by a physician."

# Providers experience in the ED – Qualitative analysis (n=12)

1

**They are in favor of the APP model in the emergency department**

- The APP model improves access and quality of care
- Physicians are satisfied

*« It is very beneficial for the patient and for us [emergency physicians] since I think physiotherapists have more resources to help certain patients who come to the emergency department with MSKDs. »*

2

**They have a positive perception of the roles and skills of APPs in emergency care**

- APP are MSKD experts
- They trust them and have good collaborative interactions

*« I think the diagnosis made by the physiotherapist, from a musculoskeletal perspective, is probably much more accurate, and the examination is likely much better »*

3

**Some modifications would be needed to improve the model**

- Autonomy needs to be expanded ( regulations)
- APP model in other settings

*"It is a plus for patients, especially if physiotherapists could order X-rays or even MRIs, as is done in other provinces."*

# Patients' experience and providers in a spinal pain APP model (CareAxis) Qualitative analysis (n=16)

## ORIGINAL RESEARCH

### Patients and Advanced Practice Physiotherapists' Experiences and Perceptions in a Specialized Spine Model of Care: A Qualitative Study

Simon Lafrance, PT, PhD <sup>Ⓞ;\*,†</sup> Léanne Marien <sup>Ⓞ;\*,†</sup> François Desmeules, PT, PhD <sup>Ⓞ;\*,†</sup>  
Caitriona Cunningham, PT, PhD <sup>Ⓞ;‡</sup> Carlo Santaguida, MD <sup>Ⓞ;§</sup>  
Véronique Lowry, PT, PhD <sup>Ⓞ;¶,#</sup>



**Table 3** Common themes from advanced practice physiotherapist and patient interviews

Main themes	Sub-themes
1. The standard medical model of care for spinal disorders is problematic.	Advanced practice physiotherapists consider the standard model of care ineffective. Patients reported frustrating experiences with the standard model of care.
2. The advanced practice physiotherapy model of care is a great solution to manage patients with spinal disorders.	Advanced practice physiotherapists can adequately diagnose and triage patients. Patients are getting the right care at the right time in the APP model. Patients benefit from physiotherapy care including education and exercise.
3. Areas for improvement in the advanced practice physiotherapy model of care.	Patients and physiotherapists can benefit from more follow-up physiotherapy sessions. The CareAxis model of care might not be optimal for patients with complex psychosocial issues requiring a multimodal approach. The CareAxis program can still be improved.



# What's the future of APP in Canada ?



- Local initiatives are growing rapidly
  - Primary care, EDs and specialized MSK care
- Political and professional shift
- Although interprofessional care is key – autonomy is as important
- Training, standardization and regulation need to be addressed
- Evidence and implementation results
  - Economic analyses

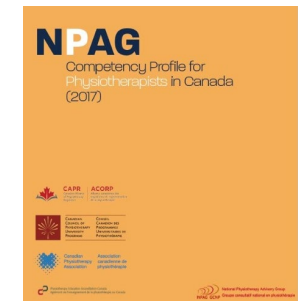
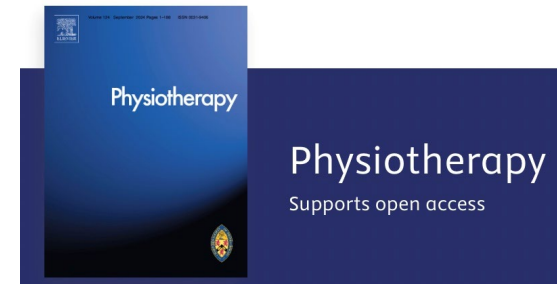
## The Future is Now for Advanced Practice Physiotherapy in Canada

*Julie Herrington, PT, BScPT, MSc, ACPAC;<sup>\*†</sup> Leslie Soever, PT, BScPT, MSc, ACPAC;<sup>§¶</sup>  
François Desmeules, PT, PhD, OPPQ fellow;<sup>‡</sup> Chandra Farrer, PT, BScPT, MSc, ACPAC;<sup>§||</sup>  
Katie Landon, BScPT, MSc, PhD;<sup>¶</sup> Anne MacLeod, PT, BScPT, MPH, ACPAC;<sup>\*\*</sup>  
Alison Rushton, EdD, MSc, Grad Dip Phys. FCSP, FMACP, LIFOMPT;<sup>††</sup>  
Laura Passalent, PT, BScPT, MHSc, ACPAC<sup>§§§|||</sup>*

1. Contextualized APP definition for Canada
  - Based on international definitions and concepts



2. Development and recognition of a national competency profile for APP
  - In development ( Tawiah et al. 2023)
  - In collaboration with the Canadian Physio Association



3. To develop and recognize APP training curricula across Canada (UdeM, U Queens and U Toronto)



**CENTRE  
DE RECHERCHE**

**CENTRE AFFILIÉ À  
L'UNIVERSITÉ DE MONTRÉAL**

**Tak !  
Merci !**