Clinical Specialists and Advanced Practitioners in Physical Therapy: A Survey of Physical Therapists and Employers of Physical Therapists in Ontario, Canada

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ABSTRACT

Purpose: Opportunities to expand the role of physical therapists (PTs) have evolved to include clinical specialists and advanced practitioners, although the literature on these roles is limited. We examined perceptions of PTs and PT employers in Ontario regarding clinical specialization and advanced practice.

Methods: Using a modified Dillman approach, a cross-sectional survey was conducted with 500 PTs and 500 PT employers in Ontario. Questionnaires were tailored to address specific issues related to each cohort.

Results: Sixty percent of PTs and 53% of PT employers responded to the survey. Thirty-three percent of PT respondents already considered themselves "clinical specialists" (CS), and 8% considered themselves "advanced practitioners" (AP), although neither role is yet formally recognized in Canada. Both groups had substantial interest in pursuing formal recognition of CS and AP status. Respondents indicated that their primary motivation to pursue such roles was to enhance clinical reasoning skills with the goal of improving client outcomes (82% for the role of CS, 71% for the role of AP). Respondents supported the involvement of academic institutions in the process (60% for CS, 70% for AP).

Conclusion: PTs and PT employers are supportive of the roles of the CS and AP within the profession, even though there is currently no formal recognition of either role in Canada.

Key Words: advanced practice, advanced practitioner, clinical specialist, expanded role, physical therapist, specialization

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RÉSUMÉ

Objet : Les possibilités d'élargir le rôle des physiothérapeutes ont évolué pour inclure les physiothérapeutes ayant une spécialisation clinique ou de pratique avancée, bien que la documentation sur ces rôles soit limitée. Nous avons examiné les perceptions des physiothérapeutes et de leurs employeurs en Ontario pour ce qui est de la spécialisation clinique et de la pratique avancée.

Méthodologie : À l'aide d'une approche Dillman modifiée, une enquête ponctuelle a été effectuée auprès de 500 physiothérapeutes et de 500 employeurs en Ontario. Les questionnaires ont été formulés spécialement en vue d'aborder des questions précises liées à chaque cohorte.

Résultats : Soixante pour cent des physiothérapeutes et 53 % de leurs employeurs ont répondu à l'enquête. Trente-trois pour cent des répondants physiothérapeutes se considéraient déjà comme des « spécialistes cliniques » (SC) et 8 % se considéraient comme des « praticiens avancés » (PA), bien qu'aucun de ces rôles ne soit encore reconnu au Canada. Ces deux groupes étaient vivement intéressés à obtenir la reconnaissance officielle de leur statut

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de SC et de PA. Les répondants ont indiqué que leur premier motif dans la poursuite de ces rôles était de perfectionner les compétences de raisonnement clinique afin d'améliorer les résultats pour les patients (82 % pour le rôle des SC, 71 % pour le rôle des PA). Les répondants soutiennent la participation des établissements d'enseignement universitaire dans le cadre de ce processus (60 % des SC, 70 % des PA).

Conclusion : Les physiothérapeutes et leurs employeurs soutiennent les rôles des SC et des PA au sein de la profession, même si ces rôles ne sont pas encore reconnus officiellement au Canada.

Mots clés : pratique avancée, praticien avancé, spécialiste clinique, rôle élargi, physiothérapeute, spécialisation

BACKGROUND

The growing demand for health and rehabilitation services in Canada, along with stabilization of health care financing, has created a need to become more innovative in health care service delivery. In 2005, the Ontario Medical Association conducted an opinion poll to determine Ontarians' perspectives on health care; the results indicated that "95 percent of Ontarians want more information on what alternatives exist to improve the quality and timeliness of care."¹ Implementation of innovative approaches to deliver cost-effective services and improve access to quality care may provide opportunities to expand the roles of physical therapists (PTs).

To improve access to timely comprehensive care during similar health care shortages and/or to promote enhanced quality of care, Australia, the United Kingdom, and the United States have developed specialized roles for PTs.²⁻⁷ For example, specialization within orthopaedics in the United Kingdom has led to decreased wait times, earlier return to work, fewer emergency-room visits, fewer diagnostic studies ordered, and increased client satisfaction.^{4,6} Physical therapy extended scope practitioners (ESPs) with advanced orthopaedic training in the United Kingdom have been shown to be equally as effective as physicians with respect to client outcomes and have reduced initial hospital costs and established greater client satisfaction.⁶ While the majority of ESPs work in the musculoskeletal field (e.g., triaging in orthopaedic clinics), the Chartered Society of Physiotherapy anticipates that this role will develop in other specialties, such as emergency care, neurosurgery, paediatric orthopaedics, rheumatology, and women's health.⁴

Over the last two decades, Canadian PTs' roles have shifted from primarily hospital-based, generalist health care professionals to practitioners in both public and private sectors (C. Miller, personal communication, 5 Oct 2007). During that same period, physical therapy entry-level education has evolved from a diploma to a baccalaureate degree to a master's degree. By 2010, all Canadian universities that offer PT educational programmes will implement the master's degree as the entry-level qualification for practice (D. Burnett, personal communication, 3 May 2007). In 1992, the Ontario public was granted direct access to physical therapy services, thus increasing the responsibility and complexity of practice and the demand for primary-care services (C. Miller,

personal communication; J. Holstein, personal communication, 6 Aug 2006).⁸

A "grassroots" movement toward recognizing clinical specialization within the profession led in 1988 to the endorsement by the Board of Directors of the Canadian Physiotherapy Association (CPA) of a framework to recognize specialization within various practice areas. Specialization was intended to be administered at arm's length from the CPA through the Physiotherapy Specialty Council of Canada (PSCC; C. Miller, personal communication, 5 Oct 2007).⁹ The CPA developed the Clinical Specialty Program Guidelines for recognition of the Clinical Specialist (CS) in Canada. The PSCC has developed competency statements for the CS, is currently finalizing the assessment components for the CS, and has made recommendations regarding the needs for a conceptual model of specialization for the profession and for a certifying agency (C. Miller, personal communication, 6 Aug 2006).^{9,10} However, it is the responsibility of CPA's practice divisions to develop CS programmes based on the predetermined guidelines.

In September 2007, the School of Physical Therapy at the University of Western Ontario (UWO) launched the first Master of Clinical Science (MClSc) programme that includes two fields of study: manipulative therapy and wound healing. In the MClSc programme in manipulative therapy, the intent is to prepare PTs to be competent in the assessment and treatment of persons with musculoskeletal dysfunction to enable effective management of clients with complex clinical presentations.¹¹ Coursework focuses on enhancement of clinical and research skills. The programme represents a partnership between the National Orthopaedic Division of the CPA and the UWO School of Physical Therapy.¹¹ Graduates of this programme will become fellows of the Canadian Academy of Manipulative Therapy and will have a clinical master's degree in manipulative therapy. Graduates of the programme will also be eligible to apply for recognition through the PSCC programme, although they will be required to demonstrate that they meet all the requirements of the Clinical Specialty Program Guidelines (C. Miller, personal communication, 5 Oct 2007).¹⁰

In 1995, an advanced practitioner (AP) programme in paediatric rheumatology was developed at the Hospital for Sick Children in Toronto, Ontario. Since then, the

programme has expanded to include training of APs in adult rheumatology and outpatient orthopaedics.¹²⁻¹⁴ In 2006, an Advanced Practice Physiotherapy Task Force was assembled in Ontario and released a discussion paper on the role of the Advanced Practice Musculoskeletal Physiotherapist in that province. The discussion paper highlighted the role of APs in the management of individuals with osteoarthritis at various institutions in the Hamilton, Kingston, and Toronto regions, suggesting that APs may potentially decrease waiting lists for total joint replacement surgery through the effective management of pre- and postoperative care.¹⁴

Currently, no international standards exist for terminology, training, or assessment of specialized/expanded PT roles. Based on definitions put forward by the CPA and the Australian Physiotherapy Association, a CS has been defined as a PT who completes a formal programme that combines clinical experience in a specialty practice area, continuing professional-development activities (both didactic and clinical), and involvement in evidence-based practice to enhance his or her knowledge and skills within the scope of regulated physical therapy practice.^{15,16} In contrast, we defined an AP as a PT who pursues a formalized continuing education programme to affirm and recognize his or her role as a practitioner with the knowledge and skills to practise beyond the regulated scope of entry-level PT practice,¹⁶ as in the United Kingdom, where ESPs can screen/triage clients, order diagnostic investigations, prescribe pharmaceuticals, and refer clients to medical specialists.⁴

The purpose of this study was to gain insight into the opinions of Ontario PTs and PT employers about the roles of the CS and the AP, in order to guide development of these expanded roles within the profession. In addition, information was sought about respondents' perceptions of the roles of professional associations and academic institutions in implementing clinical specialization and advanced practice.

METHODS

A cross-sectional survey was conducted to determine the level of interest in clinical specialization and advanced practice within Ontario and to gain insight into the perceived facilitators and barriers facing the profession in instituting these roles. A questionnaire was mailed to 500 Ontario PTs and 500 Ontario PT employers, randomly selected from two databases via a random number generator. The PT contacts were obtained from the CPA database; thus, all PTs were members of the Ontario Physiotherapy Association (OPA). The contact information for PT employers was obtained from a database collected by a co-author in the context of previous research conducted at the University of Toronto and

comprised 1,891 employers from various practice settings in Ontario.¹⁷

Questionnaires

Two questionnaires were created, one for PTs in Ontario (see Appendix) and one for PT employers in Ontario. The authors developed the questionnaires based on wide consultation with stakeholder groups, including staff in the Practice and Policy Division of CPA, PT faculty at the University of Toronto, two PTs who are fellows of the Canadian Academy of Manipulative Therapy, and three PTs who have completed AP programmes within their respective hospital settings.

The questionnaire designed for PTs had four sections. Section A gathered demographic information, and Section B allowed comparison of the respondent's perceptions of CS and AP roles. In Section C respondents identified perceived barriers to becoming a CS or AP from a list of statements, and Section D included two open-ended questions designed to capture the respondent's perceptions of how a CS or an AP might influence physical therapy practice. The information in Sections B and C was collected using a five-point Likert scale.

The questionnaire designed for PT employers had five sections. Sections A, B, and C were intended to capture the same information as the equivalent sections of the questionnaire for PTs. Section D focused on budgetary issues to determine the perceived impact that a CS or AP might have on the employer's clinical facility and finances. Finally, Section E was similar to section D of the PT questionnaire: open-ended questions were used to elicit the respondent's perceptions of the impact that hiring a CS or an AP might have on his or her clinical facility.

The questionnaires were pilot-tested with four individuals who represented a sample of convenience. Three were PTs with more than 5 years' clinical experience in various primary practice settings and expertise in one or more of the following areas: PT education, private practice, and hospital-based PT. The one employer who reviewed the questionnaire owns numerous PT clinics across Canada, including private-practice clinics, public clinics, and long-term care facilities. The individuals who reviewed the drafts were asked to comment on the clarity of the questions, ease of administration, and the time it took them to complete the questionnaire. Feedback from pilot testing indicated a need for minor changes to ensure that the questionnaire was comprehensive and easy to complete. The approximate time to complete the questionnaire was reported to be 20 minutes.

Subjects

To be eligible to participate in the study, a PT had to be registered with the College of Physiotherapists of

Ontario (CPO) and be a member of the OPA; a PT employer had to employ at least one registered PT within the province of Ontario, or be registered as a PT working as a sole-charge practitioner.

Data Collection

A modified Dillman approach was used for this study.¹⁸ Upon approval from the Research Ethics Board of the University of Toronto, the first mailing of the questionnaires took place in February 2006. A cover letter and a pre-paid return envelope accompanied each questionnaire. The cover letter detailed the rationale of the study, provided assurance of confidentiality, and stated that consent would be implied when a respondent returned the questionnaire. Each questionnaire included an instruction page, which provided operational definitions for a CS and an AP in an effort to give participants a common terminology on which to base their responses. A letter was mailed two weeks after the initial questionnaire to thank those respondents who had already completed and returned the questionnaire and remind those who had not. A second reminder letter with a replacement questionnaire and a pre-paid envelope was sent four weeks after the initial contact to remind recipients of the relevance of the study and reassure them of respondent confidentiality. Completed questionnaires were accepted until June 2006.

Data Analysis

Two databases were developed, one for PTs and one for PT employers, using the computer software Statistical Package for the Social Sciences (SPSS) version 13.0 (SPSS Inc., Chicago, IL). A double data-entry check was performed to ensure accuracy. Descriptive analysis was conducted to determine the response frequency for all questions in both the PT and PT employer questionnaires. Bivariate chi-square tests were conducted to analyze statistical significance between responses that related to the two different roles (CS and AP).

RESULTS

The data are presented according to the two target groups: PTs and PT employers.

Registered PTs in Ontario

The response rate for PTs was 60% ($N=299$) (see Figure 1). Of the 299 returned questionnaires, 279 were completed and eligible for data analysis. Table 1 shows the demographic information for those respondents who met the inclusion criteria.

Ninety-three respondents (33%) considered themselves “clinical specialists,” and, of those who did not, 92 (50%) expressed interest in becoming a CS. Twenty-two respondents (8%) considered themselves “advanced practitioners,” and, of those who did not, 80 (31%) expressed interest in becoming an AP. The top three reasons stated for becoming a CS or AP were (1) to gain enhanced knowledge and clinical reasoning skills, (2) to advance the physical therapy profession, and (3) to increase client satisfaction. According to the respondents, the main influences that CSs and APs would have on the physical therapy profession and the Ontario health system were enhanced clinical reasoning skills (84% agreed for CS, 75% for AP) and greater recognition (70% agreed for both CS and AP; see Figure 2). When asked if implementing CS or AP roles would result in less autonomy within the profession, the majority of respondents disagreed (75% for CS, 68% for AP). With respect to direct client care, the majority of respondents agreed that a CS or AP would improve client outcomes (82% for CS, 71% for AP) and would not have a negative impact on client satisfaction (80% for CS, 71% for AP). There was no significant difference between the preceding responses for the categories of CS and AP ($p>0.4$). The top three perceived barriers to pursuing either CS or AP certification were (1) financial constraints, (2) difficulty scheduling training time into a work schedule, and (3) family and social commitments.

Figure 3 illustrates the components PTs perceived as necessary for acquiring CS or AP status. Substantial

Figure 1 Response distribution of registered PTs in Ontario and PT employers in Ontario

Table 1 Demographic Information on Physical Therapist Respondents

<i>N</i>	279
Gender (male/female)	47 (17%) / 232 (83%)
Age (years)	20–30: 10% (<i>n</i> = 27) 31–40: 33% (<i>n</i> = 92) 41–50: 24% (<i>n</i> = 67) 51+: 26% (<i>n</i> = 73) No response: 7% (<i>n</i> = 20)
Highest degree earned to date	67% (<i>n</i> = 187) had a baccalaureate degree 18% (<i>n</i> = 50) had a master's degree 13% (<i>n</i> = 36) had a diploma 2% (<i>n</i> = 6) had a doctoral degree
Years practising as a PT	53% (<i>n</i> = 149) reported >15 years 15% (<i>n</i> = 42) reported 11–15 years 18% (<i>n</i> = 51) reported 6–10 years 13% (<i>n</i> = 37) reported ≤5 years
Employment status	Full time: 63% (<i>n</i> = 175) Part time: 26% (<i>n</i> = 72) Other: 11% (<i>n</i> = 32)
Time devoted to clinical practice	None: 6% (<i>n</i> = 18) Up to 25%: 8% (<i>n</i> = 23) 26–50%: 5% (<i>n</i> = 14) 51–75%: 10% (<i>n</i> = 28) 76–100%: 70% (<i>n</i> = 194) No response: 1% (<i>n</i> = 2)
Primary field of practice	Orthopaedics: 56% (<i>n</i> = 156) Mixed: 32% (<i>n</i> = 90) Neurological: 8% (<i>n</i> = 22) Cardiorespiratory: 4% (<i>n</i> = 11)
Primary clinical setting employed	Private practice: 42% (<i>n</i> = 116) Teaching and community hospitals (combined): 23% (<i>n</i> = 65) Community-based rehabilitation: 13% (<i>n</i> = 37) Rehabilitation facility: 7% (<i>n</i> = 19) University/research institute: 4% (<i>n</i> = 12) Public clinics: 2% (<i>n</i> = 6) Long-term care facility: 1% (<i>n</i> = 4) School board: 1% (<i>n</i> = 2) Other: 6% (<i>n</i> = 18)
Secondary clinical setting employed	24% (<i>n</i> = 66) reported a secondary place of employment
Participation in continuing education courses	86% (<i>n</i> = 241) reported participation within the past year

clinical experience (91% for CS, 83% for AP) and motivation for continuing professional development (i.e., didactic and practical courses; 84% for CS, 80% for AP) in respective practice areas should be required for eligibility. Other components necessary for attaining specialist or advanced practice status included clinically based courses (92% for CS, 87% for AP) and research (53% for CS, 57% for AP). PT respondents expressed the need for both academic institutions (60% for CS, 71% for AP) and professional associations (63% for CS, 56% for AP) to play a role in implementing formal certification processes for clinical specialization and advanced practice. No significant difference was found between these responses for the categories of CS and AP ($p > 0.3$).

PT Employers in Ontario

The response rate for PT employers was 53% ($n = 244$) (see Figure 1). Of 244 returned questionnaires, 212 were

complete and eligible for data analysis. Table 2 shows the demographic information for respondents who met the inclusion criteria.

Thirty-five percent ($n = 74$) indicated that they had a “clinical specialist” working for them currently, and 65% ($n = 138$) felt that such a role exists in their facility. On the other hand, 8% of employers ($n = 17$) indicated that they employed an “advanced practitioner,” and 40% ($n = 85$) felt there was a role for an AP in their facility. The primary motivation for employing a CS or an AP was to have a PT with enhanced clinical reasoning skills (78% for CS, 66% for AP) practising in their clinical facility (see Figure 2). When asked if a CS or an AP would increase the marketability of their clinical facility, the majority of respondents agreed (58% for CS, 54% for AP), but this was not their primary motivation for hiring specialized PTs (see Figure 2). With respect to direct client care, the majority of respondents felt that having a CS or AP on staff would improve client outcomes (72% for CS, 65% for AP) and would not negatively affect client satisfaction (70% for CS, 69% for AP). There were no significant differences among the preceding responses with respect to the categories of CS and AP ($p > 0.3$). The top three perceived barriers to a PT's becoming a CS or an AP were (1) insufficient public awareness, (2) financial constraints on the facility, and (3) lack of educational standards for such roles.

Figure 3 illustrates the components that PT employers perceived as necessary for attaining CS or AP status. Employers stated that substantial clinical experience (84% for CS, 84% for AP) and continuing professional development (81% for CS, 78% for AP) in the PT's practice area should be required for eligibility. Respondents valued clinically based courses (90% for CS, 88% for AP) more than research (58% for CS, 60% for APs). Furthermore, PT employers appeared more willing to allow time off for clinical training (51% for CS, 47% for AP) than for research (41% for CS, 39% for AP). Respondents felt a need for both academic institutions (63% for CS, 70% for AP) and professional associations (59% for CS and AP) to have a role in implementing a formal certification process for clinical specialization and advanced practice. There were no significant differences among the preceding responses with respect to the categories of CS and AP ($p > 0.5$).

Given the potentially high costs of a CS or AP programme, PT employers were asked whether they would be willing to subsidize any or all of these costs. Nearly half of all employers (45%) reported that they would not be willing to offset the total costs of a CS or AP programme; however, 28% would subsidize up to 25% of programme costs. On the other hand, 58% of employers were willing to offer higher salaries to PTs who had earned CS or AP certification.

Figure 2 Opinions of PTs and PT employers on the potential impact of clinical specialists and advanced practitioners on the physical therapy profession and on the health care system in Ontario (a) Clinical specialists (CS) and advanced practitioners (AP) will lead to . . . 1 = A more defined scope of practice within the Ontario health care system (9% disagree or strongly disagree for a CS; 16% disagree or strongly disagree for an AP); 2 = Enhanced clinical reasoning skills (4% disagree or strongly disagree for a CS; 4% disagree or strongly disagree for an AP); 3 = Greater recognition within the Ontario health care system (9% disagree or strongly disagree for a CS; 6% disagree or strongly disagree for an AP); 4 = Greater earning potential (14% disagree or strongly disagree for a CS; 9% disagree or strongly disagree for an AP) There was no significant difference between the responses for the categories of CS and AP for each statement ($p > 0.4$). (b) Clinical specialists (CS) and advanced practitioners (AP) will lead to . . . 1 = A more defined scope of practice within the Ontario health care system (13% disagree or strongly disagree for a CS; 19% disagree or strongly disagree for an AP); 2 = Enhanced clinical reasoning skills (6% disagree or strongly disagree for a CS; 8% disagree or strongly disagree for an AP); 3 = Greater recognition within the Ontario health care system (13% disagree or strongly disagree for a CS; 14% disagree or strongly disagree for an AP); 4 = Greater earning potential (16% disagree or strongly disagree for a CS; 14% disagree or strongly disagree for an AP); 5 = Increased marketability of clinical facility (20% disagree or strongly disagree for a CS; 21% disagree or strongly disagree for an AP). There was no significant difference between the responses for the categories of CS and AP for each statement ($p > 0.3$).

DISCUSSION

To the authors' knowledge, this is the first study to examine the opinions of PTs and PT employers regarding clinical specialization and advanced practice. The results indicate that there is substantial interest from both Ontarian groups in creating the positions of CS and AP. A proportion of respondents already considered themselves to be "clinical specialists" and/or "advanced practitioners," even though no formal recognition of these titles exists within PT under current Canadian legislation. The AP designation is beginning to be recognized within several institutions across Ontario where training programmes have been initiated. The primary motivation behind the pursuit of such an expanded role was to enhance the clinical reasoning skills of PTs with the goal of improving client outcomes. The survey results reported here suggest that both types of positions would be perceived to have a positive impact on the physical therapy profession, on the Ontario health care system, and, most importantly, on direct client care. Respondents stated that clinical experience and involvement in professional development through postgraduate didactic and practical courses would be essential qualifications for admission into CS and AP certification programmes. Respondents also supported the involvement of both academic institutions and professional associations in the development of accredited and formalized programmes. Overall, the results suggest

that PTs and PT employers are ready for clinical specialization and advanced practice to be incorporated into the physical therapy profession and Canadian health care.

Given that the role of the CS is ill defined, it is reasonable that a respondent with substantial clinical experience in direct client care may consider him- or herself a CS. For example, a PT who focuses her practice in orthopaedics may regard herself as a CS. The Orthopaedic Division of the CPA has implemented a postgraduate education system to promote excellence in education, practice, and research;^{19,20} this postgraduate educational programme is accredited by the International Federation of Orthopedic and Manipulative Therapists. It is reasonable to assume that PTs who have successfully attained an Advanced Diploma of Manual and Manipulative Physiotherapy or a Master of Clinical Science in Manipulative Therapy would perceive themselves as "clinical specialists." At present, however, provincial legislation for the profession does not permit the use of a designation indicating higher levels of expertise in client care that such a PT would possess. A framework and an educational programme that would ensure a PT with advanced clinical reasoning, professional judgement, and clinical skills could use the CS designation needs to be refined and legislated; such designation could help both the public and referral sources to access appropriate primary care services.

Figure 3 Opinions of PTs and PT employers regarding the process for acquiring clinical specialist (CS) and advanced practice (AP) certification (a) Components for acquiring clinical specialist (CS) and advanced practitioner (AP) standing should include 1 = Clinical/practical courses (1% disagree or strongly disagree for a CS; 3% disagree or strongly disagree for an AP); 2 = Substantial clinical experience in the respective area (4% disagree or strongly disagree for a CS; 10% disagree or strongly disagree for an AP); 3 = Continuing professional development (3% disagree or strongly disagree for a CS; 4% disagree or strongly disagree for an AP); 4 = Academic institutions should have a critical role in the process (6% disagree or strongly disagree for a CS; 4% disagree or strongly disagree for an AP); 5 = Research should be an integral part of the process (15% disagree or strongly disagree for a CS; 11% disagree or strongly disagree for an AP); 6 = Professional associations should play a key role in the process (8% disagree or strongly disagree for a CS; 7% disagree or strongly disagree for an AP). There was no significant difference between the responses for the categories of CS and AP for each statement ($p > 0.3$). (b) Components for acquiring clinical specialist (CS) and advanced practitioner (AP) standing should include 1 = Clinical/practical courses (2% disagree or strongly disagree for a CS; 2% disagree or strongly disagree for an AP); 2 = Substantial clinical experience in the respective area (6% disagree or strongly disagree for a CS; 5% disagree or strongly disagree for an AP); 3 = Continuing professional development (1% disagree or strongly disagree for a CS; 2% disagree or strongly disagree for an AP); 4 = Academic institutions should have a critical role in the process (10% disagree or strongly disagree for a CS; 7% disagree or strongly disagree for an AP); 5 = Research should be an integral part of the process (16% disagree or strongly disagree for a CS; 12% disagree or strongly disagree for an AP); 6 = Professional associations should play a key role in the process (10% disagree or strongly disagree for a CS; 10% disagree or strongly disagree for an AP). There was no significant difference between the responses for the categories of CS and AP for each statement ($p > 0.5$).

Although evidence to support expanded roles for PTs comes primarily from abroad, the role of the AP is not foreign to Canada. The Hospital for Sick Children in Toronto successfully piloted the first AP programme in paediatric rheumatology, the Physical Therapy Practitioner (PTP).^{12,13} Campos et al. demonstrated that “client and parent satisfaction with services provided by the PTP was equal to the physicians in providing care and management.”¹² This programme, inspired by the nurse practitioner model of sharing responsibilities among health care professionals, has since extended into other institutions and has grown to include adult rheumatology and orthopaedics.^{12,13,21,22} In Ontario, hospitals and organizations are developing AP roles to meet the need for an interdisciplinary approach that efficiently manages individuals with arthritis, the leading cause of pain, disability, and visits to health care providers in Canada.²³ APs are playing key roles in multidisciplinary assessment clinics, triaging clients with musculoskeletal disorders to appropriate care providers (e.g., conservative or surgical management of osteoarthritis) and assisting in the post-operative care of individuals who have undergone total hip or knee replacement surgery.¹⁴

The increased demand for total joint replacement procedures, along with a shortage of orthopaedic surgeons and other health care practitioners, has contributed to progressively longer waiting times for these procedures.²⁴ Part of the Wait Time Strategy proposed by Ontario's Ministry of Health and Long-Term Care is to address timely health care access to hip and knee joint replacement surgery.²⁵ The goal is to reduce waiting lists by funding innovative, evidence-based strategies. Institutions across Ontario have implemented programmes to train PTs to assume AP roles within a multi-disciplinary team to manage the care of individuals with osteoarthritis.¹⁴ Aiken et al. conducted a study in Kingston, Ontario, to examine the effectiveness of expanding the role of the PT in arthroplasty outpatient orthopaedic clinics.²⁴ Their findings indicated that PTs could effectively manage pre- and postoperative clients for the orthopaedic surgeons, thus reducing the surgeons' clinical caseload. This suggests that the use of APs has the potential to decrease waiting times for arthroplasty by allowing surgeons to spend more time operating or assessing new clients.²⁴

Survey results demonstrated a high degree of support from Ontario PTs for the role of the CS and the AP.

Table 2 Demographic Information on PT Employer Respondents

<i>N</i>	212
Gender (male/female)	72 (34%) / 140 (66%)
Age (years)	20–30: 6% (<i>n</i> = 12) 31–40: 27% (<i>n</i> = 58) 41–50: 37% (<i>n</i> = 78) 51+: 27% (<i>n</i> = 58) No response: 3% (<i>n</i> = 6)
Registered Physical Therapist	93% (<i>n</i> = 197) of employers were registered PTs
Years of work experience in the rehabilitation sector	63% (<i>n</i> = 133) reported >15 years 13% (<i>n</i> = 28) reported 11–15 years 16% (<i>n</i> = 35) reported 6–10 years 6% (<i>n</i> = 12) reported ≤5 years 2% (<i>n</i> = 4) did not report their years of experience
Number of PTs employed	40% (<i>n</i> = 84) are independent sole practitioners 38% (<i>n</i> = 81) employ 1–5 PTs 11% (<i>n</i> = 23) employ 6–10 PTs 10% (<i>n</i> = 21) employ >10 PTs 1% (<i>n</i> = 3) did not report the number of PTs they employ
Primary client caseload	Orthopaedics: 69% (<i>n</i> = 147) Mixed: 27% (<i>n</i> = 57) Neurological: 2% (<i>n</i> = 5) Cardiorespiratory: 0% (<i>n</i> = 0) No response: 1% (<i>n</i> = 3)
Primary clinical setting	Private practice: 62% (<i>n</i> = 132) Teaching and community hospitals (combined): 13% (<i>n</i> = 28) Community-based rehabilitation: 9% (<i>n</i> = 19) Rehabilitation facility: 2% (<i>n</i> = 5) University/research institute: 0.5% (<i>n</i> = 1) Public clinics: 3% (<i>n</i> = 7) Long-term care facility: 2% (<i>n</i> = 5) School board: 0.5% (<i>n</i> = 1) Other: 5% (<i>n</i> = 11) No response: 1% (<i>n</i> = 3)
Secondary clinical setting	24% (<i>n</i> = 51) reported a secondary place of employment

Of those PTs who did not already consider themselves to be “clinical specialists” (67%), half expressed interest in pursuing clinical specialization. In contrast, of the PTs who did not already consider themselves to be “advanced practitioners” (92%), only 31% were interested in becoming APs. Likewise, 65% of PT employers felt that a role for a CS existed within their facility, whereas only 40% felt that a role existed for an AP. Current trends within the profession away from hospital-based practice and toward private practice may explain the higher percentages of respondents interested in establishing clinical specialization as opposed to advanced practice. In addition, the role of APs in the community is not well defined; the AP title, competencies, and skills have limited portability across work environments and geographic areas at present, and hence this role is recognized only within the (hospital-based) training institution where medical directives are appointed. Medical directives contain the conditions and circumstances under which delegation to an AP may occur, in order for health care to be delivered without a physician’s

direct order.²⁶ Furthermore, there is a lack of consistency across Ontario (as well as across Canada) in terms of the training, certification, and title assignment for AP roles within the physical therapy profession, the health care system, and society.

PTs perceived financial constraints and time restrictions within the workplace as the most significant barriers to becoming a CS or an AP. However, most PT employers reported some flexibility in terms of allowing PTs time off to pursue specialized training. Thus, a discrepancy exists between the barriers perceived by PTs and those identified by PT employers. The majority of employers were not willing to offer full subsidization of educational costs; nevertheless, lack of employer subsidization could be offset by the higher earning potential that might follow the acquisition of specialized qualifications.

Implementation of CS and AP designations will require considerable support from all levels of the physical therapy profession. The majority of both PT and PT employer respondents to the present survey expressed the need for involvement from both professional associations and academic institutions. If CSs and APs are to be recognized and legislated by provincial regulators, a standardized approach to programme development, training, assessment, and certification through collaboration between the CPA and accredited universities will need to be further developed.

The results of this survey provide an overview of the perceptions of the potential roles and involvement of both the CS and the AP within the Ontario health care system and the physical therapy profession. However, some limitations should be mentioned. Only Ontario PTs who were also CPA members were surveyed, which may have introduced a bias toward greater professional interest. Given that the majority of respondents serve orthopaedic clients in private-practice settings, and that there was limited representation from the teaching and community hospitals where the role of the AP has been identified, there is a potential for responder bias. Because the primary distribution of registered PTs with active certificates practising in Ontario is in orthopaedic (54%), neurological (20%), and cardiorespiratory (12%) practice areas (S. Tooze, personal communication, 1 Aug 2006), our sample is representative of the current professional practice pattern; however, there were no PT employer respondents in this study who provide physical therapy services for cardiorespiratory and neurological populations as their primary caseload.

In addition, during questionnaire development there was limited input from current “advanced practitioners” in Ontario and from provincial physical therapy regulators. Aside from the operational definitions provided in the questionnaire booklet, there was no assessment of the respondents’ knowledge of CS and AP terminology, roles, and differentiation. Lastly, there may have been

ambiguity among respondents with respect to the statements provided throughout the questionnaire.

CONCLUSION

The results of the survey reported here suggest that PTs have substantial interest in pursuing CS and AP roles and that PT employers are interested in hiring those with such designations. Canada has not moved as far as other countries, such as Australia, the United Kingdom, and the United States, in implementing the necessary legislative and regulatory framework to put expanded roles into practice. The promotion of clinical specialization and advanced practice may effectively position PTs to expand their roles within the rapidly evolving Canadian health care system. Although formal recognition of the advanced practitioner has not been established in Ontario, PTs functioning in that role have been shown to provide comprehensive client-focused management, improve client outcomes, reduce waiting times, and optimize existing health human resources.¹⁴ As clinical specialization continues to be developed, research will be required to examine whether or not a CS can benefit the client, the organization, and the health system. Clinical specialization and advanced practice offer innovative strategies with the potential to improve the health of Ontarians through enhanced health services delivery, reduced waiting lists, and better access to high-quality, evidenced-based care.

KEY MESSAGES

What Is Already Known on This Subject

Currently, there is no formal recognition of either a “clinical specialist” or an “advanced practitioner” in Canada, despite grassroots movements toward the implementation of clinical specialization and advanced practice within the physical therapy (PT) profession over the last two decades. The literature to support expanded PT roles comes primarily from our international counterparts.

What This Study Adds

Our cross-sectional study examining the perceptions of both PTs and PT employers in Ontario indicated substantial interest in the implementation of CS and AP roles. Results suggest that clinical specialization and advanced practice are perceived to have a positive impact on the PT profession, the Ontario health care system, and the client in terms of optimizing service delivery and improving access to high-quality, evidenced-based care. Participants recommended collaboration between academic institutions and

professional associations to establish a standardized approach to programme development, training, and certification.

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APPENDIX: 2006 SURVEY OF PHYSICAL THERAPISTS IN ONTARIO.

The Role of Clinical Specialization and Advanced Practice in Physical Therapy

SAP Survey

2006 Survey of Physical Therapists in Ontario

☐ If you are not a physical therapist please check the box and return the questionnaire.

ASSURANCE OF CONFIDENTIALITY

This research project has received Ethics approval from the University of Toronto Research Ethics Board. Completed questionnaires will be kept in a secure location at the University and will be accessed only by the research team. Results will be reported in summary form only and no individual or employer will be identified.

Please do not remove the identification number on this questionnaire. It will be used solely to monitor returns and prevent re-mailing to those who have already responded. Your contact information will not be entered into the survey database, used in the analysis, or shared with any organization.

INSTRUCTIONS

The majority of questions can be answered by filling in a circle or blank. We ask that you fill in the questions for both "Clinical Specialist" and "Advanced Practitioner" so we are able to analyze a comparison based on your perspectives. Please return your completed questionnaire in the prepaid envelope provided.

Example:

<i>Please identify the extent to which you agree or disagree with the following statements regarding <u>both</u> clinical specialists and advanced practitioners by filling in the circle.</i>											
Strongly disagree ①		Disagree ②		Neutral ③		Agree ④		Strongly agree ⑤			
Strongly Disagree		←————→		Strongly Agree		Strongly Disagree		←————→ Strongly Agree			
B4. A clinical specialist / advanced practitioner will ...		①		②		●		④		⑤	
Result in enhanced clinical reasoning skills...		①		②		●		④		⑤	

DEFINITIONS

Clinical Specialist

Physical therapist who completes a formal program that combines clinical experience in a specialty practice area, continuing professional development activities, and involvement in evidence-based research to enhance their knowledge and skills within the regulatory scope of the PT profession.

Examples: Sports physical therapist, Paediatric physical therapist, etc.

Advanced Practitioner

Physical therapist who has pursued a formalized continuing education program to affirm and recognize his/her role as a practitioner with the knowledge and skills to practice beyond the scope of a general physical therapist.

Example: Practitioner able to order diagnostic tests, prescribe medications, etc.

Primary place of employment

The facility where you work the greatest number of hours in your *last typical working week*.

Secondary place of employment (if applicable)

The facility where you work the next greatest number of hours in your *last typical working week*.

SECTION A: DEMOGRAPHIC INFORMATIONA1. Sex: ☐ M ☐ F

A2. Year of birth: 19__ __

A3. (i) What is the highest degree you have earned to date? (*please choose one*)☐ Diploma ☐ Bachelor's ☐ Master's ☐ Doctorate

(ii) Please specify the discipline: _____

A4. How long have you been practicing as a physical therapist? (*please choose one*)☐ 0–5 years ☐ 6–10 years ☐ 11–15 years ☐ > 15 yearsA5. What percent of your time are you presently practicing clinically? (*please choose one*)☐ None ☐ 1–25% ☐ 26–50% ☐ 51–75% ☐ 76–100%A6. What is your primary field of physical therapy? (*please choose one*)☐ Cardiorespiratory ☐ Neurological ☐ Orthopaedic ☐ Mixed—specify: _____

A7. How are you currently employed?

☐ Full time ☐ Part time ☐ Other—specify: _____A8. What is your primary and secondary (*if applicable*) place of employment?

- Please indicate the primary setting that is closest to yours with a “**P**” (*choose only one*)

- If applicable, indicate the secondary setting that is closest to yours with an “**S**” (*choose only one*)

___1 Teaching hospital	___5 Schedule 5 clinic	___9 Community based rehab
___2 Community hospital	___6 Private clinic	___10 School board
___3 Rehab facility	___7 Nursing home	___11 University/Research Institute
___4 Long-term care facility	___8 Home care	___12 Other—specify: _____

A9. Have you completed continuing education courses within the past year? ☐ Yes ☐ No

If yes, approximately how many hours in total? _____

SECTION B: PERSPECTIVES ON BOTH CLINICAL SPECIALISTS AND ADVANCED PRACTITIONERS

	Clinical Specialist	Advanced Practitioner
B1. Do you consider yourself a..... <i>Instructions: please refer to the definitions on page 1 and choose one response for both clinical specialist and advanced practitioner.</i>	O ₁ Yes ... skip to question B3 O ₂ No O ₃ Not sure	O ₁ Yes ... skip to question B3 O ₂ No O ₃ Not sure
B2. Are you interested in becoming a..... <i>Instructions: please choose one response for both clinical specialist and advanced practitioner.</i>	O ₁ Yes O ₂ No ... skip to question B4	O ₁ Yes O ₂ No ... skip to question B4
B3. Please RANK the top 3 reasons why you became or would be interested in becoming a..... <i>Instructions: please place a "1" beside the most important reason, a "2" beside the second most important and a "3" beside the third most important reason for both clinical specialist and advanced practitioner.</i>	___ Enhanced earning potential ₁ ___ Advance the PT profession ₂ ___ Advanced knowledge & clinical reasoning skills of PTs ₃ ___ Marketability ₄ ___ Improved patient satisfaction ₅ ___ Recognition ₆ ___ Competitive edge in the field ₇ ___ Others: _____	___ Enhanced earning potential ₁ ___ Advance the PT profession ₂ ___ Advanced knowledge & clinical reasoning skills of PTs ₃ ___ Marketability ₄ ___ Improved patient satisfaction ₅ ___ Recognition ₆ ___ Competitive edge in the field ₇ ___ Others: _____
Please identify the extent to which you agree or disagree with the following statements regarding both clinical specialist and advanced practitioner by filling in the circle.	Strongly disagree ① Disagree ② Neutral ③ Agree ④ Strongly agree ⑤	Strongly disagree ① Disagree ② Neutral ③ Agree ④ Strongly agree ⑤
B4. A clinical specialist / advanced practitioner will ...	Strongly Disagree Strongly Agree	Strongly Disagree Strongly Agree
a. Provide physical therapists with a more defined scope of practice within the Ontario health care system.....	① ② ③ ④ ⑤	① ② ③ ④ ⑤
b. Result in enhanced clinical reasoning skills.....	① ② ③ ④ ⑤	① ② ③ ④ ⑤
c. Provide physical therapists with greater recognition within the Ontario health care system.....	① ② ③ ④ ⑤	① ② ③ ④ ⑤
d. Increase costs to the Ontario health care system.....	① ② ③ ④ ⑤	① ② ③ ④ ⑤
e. Provide physical therapists with greater earning potential.....	① ② ③ ④ ⑤	① ② ③ ④ ⑤
f. Provide physical therapists with less autonomy.....	① ② ③ ④ ⑤	① ② ③ ④ ⑤

	Clinical Specialist		Advanced Practitioner	
	Strongly Disagree ←	Strongly Agree →	Strongly Disagree ←	Strongly Agree →
B4. A clinical specialist / advanced practitioner will ...				
g. Create a hierarchy in the Physical Therapy profession.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
h. Alter the role of the generalist physical therapist.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
i. Alter the role of the physical therapist assistant.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
B5. Clinical specialists and advanced practitioners will impact patient care by:				
	Strongly Disagree ←	Strongly Agree →	Strongly Disagree ←	Strongly Agree →
a. Improving patient outcomes.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
b. Decreasing general patient satisfaction	①	② ③ ④ ⑤	①	② ③ ④ ⑤
c. Allowing timely access to coordinated, quality care.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
d. Offering cost-effective patient care.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
B6. What do you think is a reasonable process for becoming a clinical specialist and an advanced practitioner?				
	Strongly Disagree ←	Strongly Agree →	Strongly Disagree ←	Strongly Agree →
a. Eligibility for the process should require substantial clinical experience in the respective area	①	② ③ ④ ⑤	①	② ③ ④ ⑤
b. Clinical/practical courses should be an essential part of the process.	①	② ③ ④ ⑤	①	② ③ ④ ⑤
c. Academic institutions should have a critical role in the process.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
d. Research should be an integral part of the specialization process.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
e. Professional associations should play a key role in the process.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
f. Continuing professional development should be an integral part of the process.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤

SECTION C: PERCEIVED BARRIERS

		Clinical Specialist		Advanced Practitioner	
		Strongly Disagree	Strongly Agree	Strongly Disagree	Strongly Agree
		←	→	←	→
C1. What do you perceive are the barriers to becoming a clinical specialist and an advanced practitioner?					
a.	Insufficient awareness in the Physical Therapy profession.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
b.	Incorporating training time into your work schedule.....	①	② ③ ④ ⑤	①	② ③ ④ ⑤
c.	Limited geographical access to university based programs	①	② ③ ④ ⑤	①	② ③ ④ ⑤
d.	Financial constraints (i.e., educational costs).....	①	② ③ ④ ⑤	①	② ③ ④ ⑤

C1. What do you perceive are the barriers to becoming a clinical specialist and an advanced practitioner?	Clinical Specialist		Advanced Practitioner	
	Strongly Disagree ←	Strongly Agree →	Strongly Disagree ←	Strongly Agree →
e. Family and social commitments.....	1	2 3 4 5	1 2 3 4 5	
f. Lack of self-confidence.....	1	2 3 4 5	1 2 3 4 5	
g. Opposition from other health care professionals.....	1	2 3 4 5	1 2 3 4 5	
h. Currently, there is no educational standardization for the role of a...	1	2 3 4 5	1 2 3 4 5	
i. Lack of a need within the Physical Therapy profession.....	1	2 3 4 5	1 2 3 4 5	
j. Lack of utilization within the Physical Therapy profession.....	1	2 3 4 5	1 2 3 4 5	
k. Lack of employer support.....	1	2 3 4 5	1 2 3 4 5	
l. Loss of generalist skills.....	1	2 3 4 5	1 2 3 4 5	
m. Lack of clarity about the legal medical liability.....	1	2 3 4 5	1 2 3 4 5	

SECTION D: PERSONAL OPINIONS

D1. How would the role of a **clinical specialist** affect physical therapy practice?

D2. How would the role of an **advanced practitioner** affect physical therapy practice?

Thank you for taking the time to complete this questionnaire.