

# Changes to Rehabilitation Service Delivery and the Associated Physician Perspectives During the COVID-19 Pandemic

## *A Mixed-Methods Needs Assessment Study*

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**Abstract:** This project aimed to determine the impact of and needs from physician members of the Canadian Association of Physical Medicine & Rehabilitation during the early response to the COVID-19 global pandemic. The purpose of this project was to develop a framework for addressing the pandemic tailored to the needs of Canadian physiatrists. A convergent mixed-methods design was used for this needs assessment quality project. A total of 136 responses were obtained with an overall response rate of 34%. Three major themes were identified relating to the impact of COVID-19 on physicians: (1) changes to direct patient care, (2) changes to nonclinical aspects of physician's practices, and (3) impacts on personal and family well-being. Three requests for Canadian Association of Physical Medicine & Rehabilitation support during the pandemic were as follows: (1) collaborative sharing of information and resources, (2) advocacy for both patients and providers, and (3) avenues for social connection and wellness. This project provided insight into the impact of COVID-19 and current needs of Canadian Association of Physical Medicine & Rehabilitation physicians. The results were used to develop a solutions framework including guidance on use of virtual care and holding education webinars on high-yield topics. Next steps include a follow-up survey on change in preparedness and member satisfaction with the Canadian Association of Physical Medicine & Rehabilitation response.

**Key Words:** COVID-19 Pandemic, Rehabilitation, Virtual Health, Mixed Methods

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Many physician's practices were thrown into disarray with the declaration of the COVID-19 pandemic, with abrupt changes to patient care, practice patterns, and personal lives as a result of this emergency. The first presumptive case of COVID-19 occurred in Canada on January 25, 2020, and the COVID-19 pandemic was officially declared on March 11, 2020, by the World Health Organization.<sup>1</sup> By this date, a total of 117 cases had been confirmed in Canada.<sup>2</sup> The COVID-19 pandemic represents the largest emergency response and swiftest shift in practice ever experienced by currently working physicians globally. The response in Canada developed rapidly within that

first week and has continued to evolve since. School closures began March 12, 2020, in some locations and subsequently rolled out across the country within days.<sup>3</sup> All individuals entering the country were asked to self-isolate for 14 days after returning. Many physicians were impacted by this request. States of emergency, bans on mass gatherings, and shutdowns of nonessential businesses began March 17, 2020.<sup>4</sup> Within days, elective procedures and nonurgent medical treatments were postponed, as the Canadian health system prepared its response to the pandemic.

For physical medicine and rehabilitation (PMR) physicians (ie, physiatrists), the change in provision of medical services for both inpatient and outpatient services underwent rapid change beyond the control of individual physicians. Inpatient rehabilitation services were refocused to respond to the expected needs arising out of the pandemic, rather than traditional rehabilitation needs. Many outpatient services were suspended, requiring large-scale conversion to telemedicine (or virtual health) to a wide population, including many that are medically frail. Without expertise, anecdotal reports from Europe and Asia provided only a glimpse of what was to come.

Within 10 days of the pandemic declaration, it was apparent that there was no existing framework for physicians to follow or adhere to in how to care for their patients. The Canadian Association of Physical Medicine & Rehabilitation (CAPM&R), as the national specialty society for physiatry in Canada, sought to develop a framework and action plan as the pandemic unfolded. The CAPM&R wished to assess the rapidly changing impact to the Canadian healthcare system across different provinces and capture the immediate perspective of Canadian physiatrists to assess and assist with delivery of rehabilitation services and support our colleagues.

Using a mixed-methods approach, a national survey of Canadian physiatrists was developed to investigate the early effect of the pandemic on the practice of PMR across the country, within 2 weeks after the official pandemic declaration. Quantitative data were collected to provide a snapshot of practice changes occurring during the early weeks of this pandemic, and qualitative data provided further details regarding the first-hand

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experiences of individual psychiatrists as these changes occurred. This survey represented a rapid needs assessment for the CAPM&R in a time of healthcare crisis, and this article documents the experience and findings during the early response to the COVID-19 pandemic.

## METHODS

### Study Design

A convergent mixed-methods design was used for this needs assessment quality improvement project, where the quantitative results and qualitative results were collected simultaneously through an anonymous online survey.<sup>5</sup> The quantitative and qualitative results were then analyzed separately, with integration occurring during the initial data collection and again in the subsequent discussion. This survey was conducted as a quality improvement project for the CAPM&R as a national specialty organization and did not fall within the scope of research ethics board review (Article 2.5, Tri-council Policy Statement),<sup>6</sup> and a waiver for ethics was obtained from the Vancouver Island Health Authority research ethics coordinator. The results of this survey were used to inform subsequent responses from the CAPM&R around educational webinars and other ways to meet the needs of its members.

### Study Participants

Participants included all active members of the CAPM&R, including practicing and resident physicians. Recruitment occurred via an e-mail invitation to the CAPM&R active membership list, sent by the CAPM&R secretariat. The survey was distributed on March 24, 2020, and remained open for 7 days. A total of 395 e-mail invitations were successfully delivered. As this was an anonymous online survey, implied consent was obtained by completion and submission of the survey by the participant.

### Survey Tool and Data Collection

An anonymous online survey tool was developed by project team members and used for all data collection. Survey questions were created de novo by CAPM&R executive members to identify current state experiences and perspectives of CAPM&R members at the beginning of the COVID-19 pandemic (see Appendix 1, Supplemental Digital Content 1, <http://links.lww.com/PHM/B46>). Survey questions included both quantitative and qualitative responses, assessing participant self-isolation patterns, changes to practice logistics such as virtual care and personal protective equipment, impacts on personal and professional lives, and type of supports requested from the CAPM&R. Participants were invited to complete the survey using the SurveyGizmo web-based platform,<sup>7</sup> and all data collection occurred electronically via this online survey. The CAPM&R secretariat holds an enterprise license for this software.

### Data Analysis

Quantitative data analysis was completed using descriptive statistics in Microsoft Excel (2016). Descriptive content analysis of the qualitative responses was completed using an inductive grounded theory approach to thematic analysis.<sup>8</sup> All narrative comments were independently coded by three authors (JY, PW, MM). Codes were discussed as a group with the

coding authors and a fourth author (HD) to provide investigator triangulation and increase the rigor of the analysis. Emergent themes were identified using consensus-based decisions.

## RESULTS

### Demographics and Participant Characteristics

A total of 395 e-mail invitations were sent to the CAPM&R membership, including 207 active psychiatrists, 77 resident physicians, 29 medical students, and the remainder either nonpsychiatrist physicians or retired members. Of these invitations, 42% (166/395) of the e-mails were opened and 82% (136/166) of those who opened the invitation subsequently responded. A total of 136 responses were obtained over the 7-day period that the survey was open, with 82% (111/136) of responses being captured within the first 24 hrs. Overall survey response rate was 34% (136/395). Broad representation from across the country was noted, with responses from members in 9 of 10 provinces and with the largest proportion arising from the provinces with documented COVID-19 infections at the time of the survey. The vast majority (85%) of respondents were not in self-isolation at the time of the survey, with only 21 individuals (15%) indicating self-isolation due to potential COVID-19 exposure or recent travel (Table 1).

### Access to Clinical Services

Psychiatrists across Canada have varying styles of practices, with combinations of primarily hospital-based (inpatient and outpatient), primarily community-based (purely outpatient), or a mixture of both. Survey respondents demonstrated a mix of hospital-based ( $n = 94$ , 69%) and community-based ( $n = 49$ , 36%) clinical practices (Table 1). Inpatient rehabilitation services were the least affected by the pandemic and described as continuing with usual practice for 67% of those practicing in a hospital. Changes in the availability of inpatient rehabilitation included altered referral patterns for inpatient care (16%) or unavailable inpatient rehabilitation (17%). Reasons for lack of availability of inpatient rehabilitation included closure of inpatient rehabilitation units, taking acute care patients instead of typical rehabilitation patients, and sending patients directly home after acute care instead of to inpatient rehabilitation.

Hospital-based outpatient clinical services were significantly affected as well, with 61% of clinics closed, 38% of clinics operating at reduced capacity, and only 1% of clinics remaining open as usual. For community clinics, 84% were closed to in-person visits and only 16% were still open to face-to-face interactions. Virtual care options were broadly used, with 62% of total respondents ( $n = 84$ ) indicating some form of virtual care being offered to patients. For clinicians using virtual care, 47% used telephone visits only, 44% used a combination of telephone and video visits, 6% used only video visits, and 2% were unspecified. For the video visits, both formal telehealth networks and a variety of commercially available video-conferencing software was used (Fig. 1). Issues identified as barriers to provision of virtual care included lack of physical examination capabilities, lack of familiarity with the different technological systems, logistics of scheduling virtual visits, and difficulties with billing and remuneration. On a more general note, the participants did demonstrate

**TABLE 1.** Participant demographics and characteristics

Characteristic	Category	Respondents (N = 136)
Age, yr	20–29	10 (7%)
	30–39	36 (26%)
	40–49	36 (26%)
	50–59	27 (20%)
	60–69	13 (10%)
	70–79	5 (4%)
	Unspecified	9 (7%)
Province of work	Alberta	24 (18%)
	British Columbia	25 (18%)
	Manitoba	1 (1%)
	New Brunswick	3 (2%)
	Newfoundland and Labrador	1 (1%)
	Nova Scotia	5 (4%)
	Ontario	55 (40%)
	Prince Edward Island	0 (0%)
	Quebec	7 (5%)
	Saskatchewan	6 (4%)
Self-isolation due to travel or potential COVID-19 exposure at time of survey	Yes	12 (9%)
	No	124 (91%)
Work at a hospital	Yes	94 (69%)
	No	22 (16%)
	Unspecified	20 (15%)
Work in community office	Yes	49 (36%)
	No	66 (49%)
	Unspecified	21 (15%)

Survey participant demographics and characteristics. Geographic distribution and practice locations of participating physiatrists.

regular use of social technology and familiarity with social media platforms, with 81% of respondents selecting use of at least one social media platform (eg, Twitter, Facebook, Instagram).

Reported access to appropriate personal protective equipment (PPE) was similar in the hospital- and community-based settings, with masks and gloves more readily available and gowns and face shields being quite limited, particularly in the community (Fig. 2).

### Impact of COVID-19 on Physicians

To further explore the physician perspective regarding changes due to the pandemic, an open narrative prompt on the survey asked respondents to describe how they had been affected by COVID-19; 81% of participants (110/136) provided a response. The responses provided by survey participants overwhelmingly demonstrated the stress and anxiety of physicians, with no specific positive responses on impact of the pandemic identified. Thematic analysis of these responses revealed three main themes regarding the impact of the pandemic, including changes to direct patient care, changes to nonclinical aspects of physician’s practices, and impacts on personal and family well-being (see Table 2 for additional participant responses).

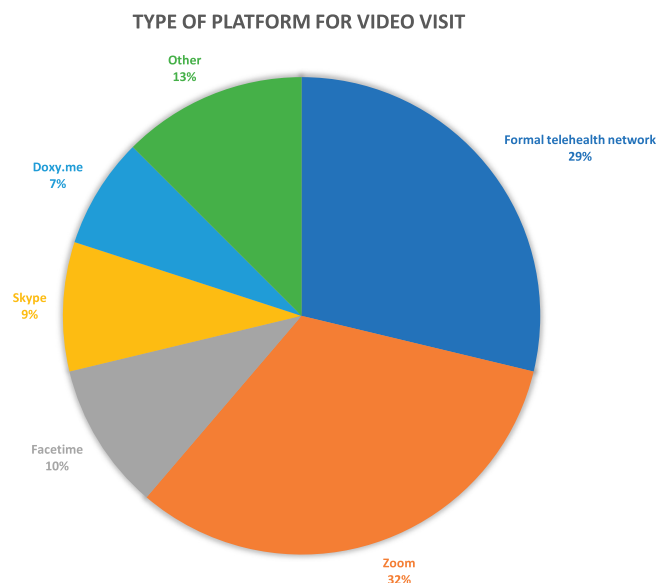
*Theme 1: The COVID-19 pandemic has greatly reduced the volume of patients seen, reduced access to clinical rehabilitation services, and shifted focus to acute or inpatient rehabilitation services. Numerous respondents indicated that significant changes to clinical practice were occurring, with the forced closure or reduction of most outpatient clinical services and an emphasis on supporting inpatient hospital services. An undertone of frustration was noted, and many participant comments highlighted a lack of autonomy and power in these significant changes to patient care.*

*“All clinics shut down, only going to hospital for inpatients, doing some telephone follow-ups, managing patient frustration and disappointment.” (Participant 126)*

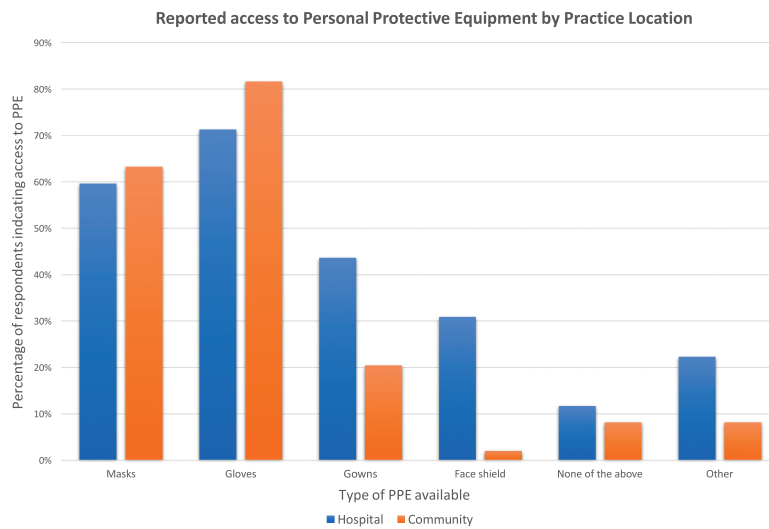
*Theme 2: The COVID-19 pandemic has caused substantial changes to the structure of physicians’ practices, including methods of clinical service delivery, financial stressors, and altered balances to other roles in research, administration, and education. In addition to the changes implemented regarding the delivery of patient care, many physicians reported major changes to other aspects of their professional practice. Those individuals involved in nonclinical roles such as research, administration, and education indicated dramatic shifts in the balance of work related to these particular roles and portfolios.*

*“Cooped up at home with kids who are not in school. Unable to use the gym and struggling to maintain a healthy routine in terms of sleep, diet, exercise. I’ve also been absorbed in administrative activity related to my leadership position which has led to additional stress.” (Participant 27)*

*Theme 3: Personal and family well-being has been greatly impacted by the COVID-19 pandemic, including changes to individual work-life balance, self-care and wellness, fears and risks of infection, and increased worries regarding family*



**FIGURE 1.** Types of platforms used by physiatrists for video-based virtual clinic encounters.



**FIGURE 2.** Reported access to PPE, based on clinical practice location.

members and family life. In addition to the changes to their professional lives and practices, many participants indicated concerns on a personal level. Comments regarding a shift in work-life balance, particularly relating to issues such as childcare and self-care, were very notable. Numerous participants also remarked on concerns regarding personal health and the health of family members, with fear and anxiety of potential infection or spread of infection evident.

*“A lot of stress. Income loss, scared to go to work and have patient contact. Worry about people’s income, my research and my patients. Worried about my family.” (Participant 4)*

**Needs for Support During COVID-19**

As a major part of this needs assessment project, participants were asked an open narrative question of how the CAPM&R can support the membership during the COVID-19 pandemic. Of the total 136 survey participants, 105 (77%) provided a written response and 31 (23%) left this question blank. Of those who provided a response, 41% (43/105) indicated no specific suggestion or that no additional supports were requested. Thematic content analysis of the other 59% of the comments identified three main themes for the types of support requested by our membership (see Table 3 for additional participant responses).

*Theme 1: CAPM&R should facilitate collaborative sharing of information and resources for health providers, patients and families.* The most frequently noted comments and requests for support involved some degree of sharing information and resources, not only directly related to COVID-19-specific issues but also for general rehabilitation concerns and how to continue supporting the patients and families that physiatrists serve on a regular basis during these unusual times.

*“I like the idea of sharing experiences with virtual care—overcoming challenges/barriers to improve this type of care. I am concerned about what role I may have to play outside of my scope if the hospital is short-staffed re: acute medical treatment/competence as I have not practiced acute medicine for probably 20 yrs. Not sure how to prepare for that.” (Participant 112)*

*Theme 2: CAPM&R should support advocacy for services for vulnerable patients with disabilities, and for physician safety, education, and delivery of care.* A central role for physiatrists has historically been to advocate for the patients and families with disabilities that we care for on a regular basis. This advocacy was identified by the majority of participants as an important role for the CAPM&R to continue and even focus on more than usual, particularly given the uncertainties and the changes to healthcare and community resources resulting from government and public policies aimed to reduce infections and manage the pandemic. In addition, many of the participants identified anxiety and discomfort in the potential need for physicians to be redeployed into clinical areas that are outside their usual scope of practice, such as returning to acute medicine when their clinical experiences have been exclusively in the rehabilitation domain for years.

*“We need to advocate for our patients with disabilities. I am very concerned about the effect of this COVID-19 situation on their health. For example, all my spasticity clinics are canceled indefinitely, which may cause a lot of functional problems for the patients.” (Participant 122)*

*Theme 3: CAPM&R should provide avenues for social connection and continued wellness during pandemic times.* Physiatrists in Canada are spread across a large geographic area, and although those physicians practicing in urban or academic centers may have better connection to colleagues, others practicing in community settings may be more isolated. Adding the physical distancing protocols required from the pandemic would increase this isolation, and thus resources to mitigate this would be beneficial.

*“Perhaps the physiatrists in the community are feeling isolated. Maybe organize a webinar or Zoom meeting where physiatrists can ask questions and get the community to brainstorm. We could organize like “ECHO [Extension*

**TABLE 2.** Themes representing the impact of COVID-19 pandemic on Canadian physiatrists

Major Themes	Example Participant Responses
<p>The COVID-19 pandemic has greatly reduced the volume of patients seen, reduced access to clinical rehabilitation services, and shifted focus to acute or inpatient rehabilitation services.</p>	<p><i>“No outpatients, all visits as can be done by telehealth. Continue to work daily as I am hospital based in a tertiary rehab and we have all our inpatients and continue to admit to free up ICU and hospital beds.” (Participant 7)</i></p> <p><i>“Community MSK/EMG practice, so far continuing to see patients with abundance of caution—pre-screening, screening, social distancing measures, strict hygiene protocols, etc. Approximately 50% decrease in appointments, therefore revenue. Laid off some staff. As of March 24, moving to virtual appointments only—expect a further significant drop in clinic revenues, more staff layoffs imminently.” (Participant 33)</i></p> <p><i>“Outpatient practice: Alterations ... with regards to 1) patient volume, 2) mode of consultation and follow-up, 3) additional time for documentation, 4) additional time in reviewing/confirming patient visits during the prior week, 5) increase wait time for payments to come through hospital billing. Inpatient practice: 1) volume of patients remains unchanged, 2) the mode of patient visits is subject to change/changing over the past few days, 3) more time and effort to maintain universal precautions/PPE [sic] and organizational policies and practice, 4) availability for external expertise (medicine consults, imaging) is limited.” (Participant 40)</i></p>
<p>The COVID-19 pandemic has caused substantial changes to the structure of physicians’ practices, including methods of clinical service delivery, financial stressors, and altered balances to other roles in research, administration, and education.</p>	<p><i>“I spend 2–3 hrs per day on teleconferences because of my leadership role. I am unable to see non-urgent outpatients. Research has ground to a halt.” (Participant 11)</i></p> <p><i>“As residency program director, the amount of administrative workload, counseling of residents, and addressing residency program issues has increased exponentially.” (Participant 16)</i></p> <p><i>“Residents and medical students are not allowed to work in my clinics and we are not to do any teaching. My university has said my current and summer undergraduate students are not allowed to participate in research, even from home. The university has banned all non-COVID studies, so my two research studies and one data analysis have had to stop.” (Participant 43)</i></p> <p><i>“I am working just to figure out how to work remotely (research, care and teach). This is consuming a lot of time. The therapy staff seem down and scared.” (Participant 85)</i></p>
<p>Personal and family well-being has been greatly impacted by the COVID-19 pandemic, including changes to individual work-life balance, self-care and wellness, fears and risks of infection, and increased worries regarding family members and family life.</p>	<p><i>“Brainstorming for meals with available ingredients until ordered food gets delivered from the grocery store in a few days. Organizing day for children and teaching as school is closed. Trying to do some paperwork remotely. Worry about our health and income.” (Participant 25)</i></p> <p><i>“Spouse is ER doc/family doc [sic] and is therefore more critical at this juncture. We have lost childcare so I have shifted to be the primary stay at home parent. I have stopped in person clinics given the direction by the public health office to avoid non urgent face to face encounters and I am doing Telehealth follow-ups at this time.” (Participant 38)</i></p> <p><i>“It’s so weird currently. People keep asking if I’m busy. I’m busy worrying about no outpatients, less inpatients (who knows why), administration who do not seem to be concerned about the lack of outpatients, threat of upcoming corona cases, lack of adequate fast access to testing (took 6 days for MD at our hospital to get test results).” (Participant 60)</i></p> <p><i>“Family assisting with some errands. Staying connected with family including vulnerable via video and texts. Trying to appreciate essential things in life.” (Participant 130)</i></p>

*of Community Health Outcomes] sessions” for physiatrists.” (Participant 45)*

**DISCUSSION**

The COVID-19 pandemic has had wide-ranging impacts across international healthcare systems and direct impacts to physicians across all specialties. The findings of our descriptive mixed-methods survey documented the real-time effects of the global pandemic on rehabilitation specialists in

Canada, during the early stages of the pandemic in our more local context. The sudden countrywide and international closures of businesses and health services have no precedent in the modern era of medicine or for currently practicing physicians, and these findings demonstrate the significant anxiety surrounding personal and professional impacts experienced by our physicians. Canadian physician clinical practice is guided by the Royal College of Physicians and Surgeons of Canada CanMEDS competency framework, including the roles

**TABLE 3.** Themes representing the needed supports for member physicians from the CAPM&R during COVID-19

Major Themes	Example Participant Responses
CAPM&R should facilitate collaborative sharing of information and resources for health providers, patients and families.	<p><i>“It would be helpful to see how other parts of the country are running their clinic, rehab units, what PPE [sic] is available for clinical activities for physiatrist running the inpatient service.” (Participant 2)</i></p> <p><i>“Posting on one site information that is useful to share with patients, but also experience with any COVID positive cases in rehab or among our unique populations (TBI, SCI, etc.) would be helpful. Right now with provincial and disease-specific emails/bulletins, I do not think more social media/emails will be helpful, more like info-overload, but if I could go to a spot to search/browse that could be helpful.” (Participant 7)</i></p> <p><i>“CAPM&amp;R can help provide guidelines and standard protocols for virtual physical examination.” (Participant 32)</i></p> <p><i>“Create a database we can “e-send” to patients for various in-home programs targeted to specific types of needs. Still need to promote rehab and mobility to avoid decline, all outpatient services are off the table. Thanks for your great work!” (Participant 134)</i></p>
CAPM&R should support advocacy for services for vulnerable patients with disabilities, and for physician safety, education, and delivery of care.	<p><i>“Please advocate on our behalf as not all hospitals are taking this as seriously for the rehab folks, just for the acute care folks. A lot of us were already underserved to start. If you could publish national guidelines then we can bring that to our administrators. For example, a lot of resources are suggesting all healthcare providers should wear a mask and gloves for all patients right now.” (Participant 43)</i></p> <p><i>“I’m sure we are all anxious to get back to our usual practices. Let us tread back lightly and cautiously in the midst of this pandemic as it may be around for longer than we expect. This may also propel our specialty into the regular use of PPE from this point on since we do rely so heavily on physical examination with patients. We may forever be more cognizant of contagions being passed from patients to staff to patients from this point forward.” (Participant 111)</i></p>
CAPM&R should provide avenues for social connection and continued wellness during pandemic times.	<p><i>“Not much. But saying hello via e-mail once in a while would be great!!!!” (Participant 80)</i></p> <p><i>“A digital “social” through Zoom? I feel a toast to surviving the newest digital age is needed. Doing ok. Thanks for your work.” (Participant 84)</i></p> <p><i>“Resources for information on how to cope with stress during COVID-19; information on good literature on the topic (COVID-19) relevant to physiatry.” (Participant 132)</i></p>

of medical expert, communicator, collaborator, leader, health advocate, scholar, and professional.<sup>9</sup> Our results clearly demonstrated that all professional roles, as well as personal and family responsibilities, were disrupted within days of the pandemic announcement. Before this pandemic, our national physician society did not have an existing framework to meet the professional, educational, financial, and personal needs of our members and patients and, thus, how to provide leadership was unclear. The identified themes surrounding rapid changes to clinical practice, shifts in balance of different professional roles, and concerns regarding personal and family well-being provided a list of concrete issues where time and energy could be focused to develop appropriate resources to address these specific concerns.

Our results showed that the impacts to clinical practice and service delivery in both hospital and community-based settings were swift, with a small proportion of physiatrists requiring self-isolation but a much larger majority of both inpatient and outpatient clinical practices affected by closures or altered operations. Two-thirds of the inpatient rehabilitation units were operating as usual, but the largest effect was seen in outpatient practices, with a tremendous shift from face-to-face interactions to provision of service via virtual means such as telephone or video-conferencing software. Similar trends were noted in other countries early in their pandemic responses as

well, with Boldrini et al.<sup>10</sup> describing difficulty in providing outpatient and home-based rehabilitation due to government restrictions in Italy, and McNeary et al.<sup>11</sup> providing early recommendations for changes to inpatient rehabilitation in the United States.

The necessary switch to virtual care occurred abruptly for most physicians, oftentimes with little background experience or infrastructure available to support this change. Our results showed that physicians adapted quickly, with more than 60% of physiatrists reporting use of virtual care immediately. However, half of these virtual visits were conducted by telephone only and a lower proportion was able to implement video interfaces as quickly. These early challenges with video represent potential barriers for virtual care, such as lack of familiarity with the different technological systems, logistics of scheduling virtual visits, and difficulties with billing and remuneration. In addition, physician remuneration for virtual care varied greatly across the country during the early stages of the Canadian pandemic response, and there remains some uncertainty regarding this issue as the acuity of the pandemic resolves but an expectation for virtual care remains. These barriers represent targets for further development of health policy and resources to support physician engagement in virtual care. Other factors identified included variability in patients’ ability to participate in virtual visits, and a greater proportion of providers conducting

follow-up visits rather than new assessments due to feasibility. Rehabilitation specialists have quickly recognized the need to support our colleagues with this transition to providing care, and both McIntyre et al.<sup>12</sup> and Verduzco-Gutierrez et al.<sup>13</sup> have published practical tips to assist the practicing physiatrist in quickly getting up to speed with this method of care delivery. This survey assisted the CAPM&R in immediately identifying a resource gap for our physician members and led to the rapid creation of a series of well-attended webinars that included topics such as the provision of virtual medicine, the legal implications of virtual care, and virtual interdisciplinary rehabilitation. Although a similar approach was taken by rehabilitation specialists in Italy, with weekly webinars or “Covinars” developed to meet physician education needs during the pandemic,<sup>14</sup> our findings allowed us to develop tools appropriate to our local Canadian context.

In addition to understanding the immediate changes to clinical care and rehabilitation service delivery experienced by Canadian physiatrists, our survey also sought a deeper understanding of the impact of the pandemic on our membership. The open narrative responses within the survey allowed for a more in-depth qualitative analysis of the lived experience and perspectives of our physician members. The thematic analysis of the question regarding impact of the COVID-19 pandemic revealed findings that confirmed the quantitative results regarding major changes to provision of clinical care, particularly in the outpatient setting and with virtual care. In addition, survey respondents were strikingly frank regarding the impacts on other aspects of their practices, such as administrative and research challenges, and the impacts on their personal lives and families. These findings enhanced the urgency for developing CAPM&R webinars and educational endeavors to address how to cope with the changes to professional practice and deal with the multitude of personal stressors reported. Direct results of this needs assessment included the creation of a mindfulness webinar for members as well as their patients and a virtual education webinar for trainees. These themes underscored the need for a national repository for COVID-19 rehabilitation-focused resources for physicians and patients, which was thus created and housed on the society’s Web site.<sup>15</sup> The need for social engagement, interaction, and supporting research and educational needs led to the decision to hold our annual scientific meeting’s educational program virtually to support junior learners, although the physical meeting had been canceled. Survey participants also highlighted the need to access continuing medical education credits virtually as many medical conferences have been canceled or postponed. As a result, all CAPM&R webinars have been accredited for continuing medical education credits by the RCPSC’s Maintenance of Certification Program.<sup>16</sup>

Several other pertinent concerns were exposed by our results regarding the experience of Canadian physiatrists. Again, this survey was done early in the response to the pandemic, and our data showed that access to PPE was a major source of worry for physician’s individual safety. We showed that there was reasonable access to gloves and masks for most physicians, but access to more robust PPE including gowns and face shields was very limited. This was further confirmed by the identified themes regarding personal wellness and the request

for CAPM&R to advocate for physician safety. Although PPE sits under provincial, health authority or institutional guidelines, participants perceived a lack of availability and indicated a need for this to be addressed. This information served to highlight the need for clinical administrators to prepare outpatient clinics for infectious outbreaks. In addition, these early findings have led to a task force to begin to describe what constitutes semiurgent or urgent rehabilitation patients who require face-to-face visits for conditions such as spasticity or the need for electrodiagnostic testing. Further webinars to discuss these concerns and delve further into the potential rehabilitation challenges of COVID-19 are planned.

Our findings do have some limitations. This survey was conducted rapidly as a quality improvement needs assessment tool, and as such, detailed information regarding participant demographics and characteristics was not included as there was no scientific comparison planned. The reported response rate of 34% is suboptimal but was felt to be valid and representative of the broad geographical distribution and thus experiences of Canadian physiatrists. Invitations were sent to all 395 members of the CAPM&R, but only 207 are active physiatrists; true response rate may have been closer to 66%, but as member status was not captured in the survey, we could not accurately determine this. Morton et al.<sup>17</sup> has stated that “low response rate does not automatically mean the study results have low validity,” and average survey response rates are documented to fall in the 35%–53% range.<sup>18</sup> As demonstrated by the themes identified and the comments from participants, physicians were managing rapid changes to their professional and personal lives at the time of this survey, which likely contributed to the lower response rate.

## CONCLUSIONS

This survey of preparedness described the experience of Canadian rehabilitation physicians at the onset of the Canadian pandemic and serves as important evidence of the real-time worries and issues faced by our membership in those early days. As a national physician organization, we did not have an existing plan to address the rapid changes from government policies to reduce or close outpatient clinical services, transition the delivery of care from face-to-face to virtual platforms, or manage the high individual stress levels and financial uncertainty. However, the issues brought to our attention by the responses and the identified themes allowed for rapid intervention by our organization, as well as the development of advocacy and educational platforms to address the needs of physiatrists across the country. This needs assessment also provided insights into ongoing issues that the broader physiatry community may be facing because of the pandemic and assisted in the development of targeted solutions. We have described an approach to quickly survey the needs of one’s community in response to novel and unforeseen circumstances, which may be helpful to others for future contingency planning.

With regard to next steps, a follow-up survey on change in preparedness and delivery of care will be helpful to evaluate members’ satisfaction with the society’s response. Structural changes from the pandemic resulting from virtual delivery of clinical care, education, and administrative tasks may have lasting challenges and benefits for improving national collaboration

and inclusivity for patients and providers living in smaller communities in Canada. Education sessions delivered virtually can also be recorded and added to a database of existing resources to improve continuing education within our specialty. The rehabilitation challenges of COVID-19 are still emerging,<sup>19–21</sup> and further continuing medical education and clinical guidance regarding management of these issues will also need to be developed, and these findings will help guide the direction needed from our society. Finally, careful reflection on these findings will assist with national pandemic planning for the future to mitigate these gaps should similar circumstances arise again.

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