

The Impact of COVID-19 Pandemic Public Health Measures on the Practice of Primary Care

Allied Health Professionals in Manitoba and Ontario

by

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Abstract

The purpose of this study was to investigate how the public health measures implemented in Manitoba and Ontario during waves 1 and 2 of the COVID-19 pandemic impacted allied health professionals working in primary care settings. This study used a case study methodology to develop four cases, two allied health professionals from Manitoba and two allied health professionals of the same professions from Ontario. Two methods of data collection were used, diary entry and interview. Diary entry data was collected between March 2020 and August 2020. Interviews were conducted in December 2020. This study's approach to data analysis was to use the framework analysis to apply a conceptual framework, specifically the Roy Adaptation Model. The Roy Adaptation Model encompasses four adaptive modes: role function, interdependence, group identity, and physiological. The results section presents how each of these modes were operationalized for each case. The public health measures affected the role function mode more significantly than the other modes. All participants experienced role disruptions with redeployment and role change with the transition to remote and virtual care. The allied health providers in both provinces experienced role reductions with limitations in their ability to practice their primary role. The implemented COVID-19 public health measures led providers to work within their roles in an adapted capacity during the length of the pandemic. The greatest differences between the experiences of providers in Ontario versus Manitoba was the timeline of events and the response of the provincial governments. This study highlights how macro policies influence the day-to-day of healthcare workers.

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Dedication

I dedicate this thesis to my family and friends.

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Chapter 1: Introduction and Study Purpose

On March 11, 2020, the World Health Organization declared a Coronavirus disease (COVID-19) pandemic (World Health Organization [WHO], 2020a). COVID-19 is caused by the newest virus to be identified amongst the Coronaviridae family, severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) (Centers of Disease Control and Prevention [CDC], 2021; Zhu et al., 2020a). Other viral relatives include MERS-CoV, responsible for Middle East respiratory syndrome (MERS) outbreaks predominately in Middle Eastern countries, and SARS-CoV, responsible for the severe acute respiratory syndrome (SARS) epidemic from 2002-2004 in which Canada was affected (CDC, 2019; Knobler et al., 2004). All three virus types are cause for concern due to their high fatality rate (Zhu et al., 2020b). Since the initial outbreak in late December 2019, the number of COVID-19 cases and associated deaths have grown linearly worldwide (WHO, 2021). As of October 3, 2022, Canada had reported over 4 million COVID-19 cases (Government of Canada [GC], 2022). At that time, the epidemiological data indicated that Canada was nearing the end of a sixth wave of the pandemic, but emerging variants were the source of continued concern (GC, 2022).

COVID-19, like MERS and SARS, has been classified as an infectious disease. An infectious disease is one that spreads from one person to another causing illness (Public Health Ontario, 2019). COVID-19 is transmitted when a person encounters respiratory droplets from an already infected individual. Droplets are created when a person sneezes, coughs, or speaks (CDC, 2020; dos Santos, 2020; Zhang et al., 2020). Transmission can also happen by touching surfaces contaminated with said droplets and then touching external respiratory tract organs (CDC, 2020). It is also currently being debated the extent to which asymptomatic carriers can infect others (Oran &

Topol, 2020). Laboratory testing remains the only method to give absolute confirmation as to whether a person has contracted COVID-19 (WHO, 2020b). Eligibility criteria for testing has continued to evolve and change throughout the progression of the pandemic. For instance, during the first few months of the pandemic in Canada, testing was reserved to certain groups of individuals who had specific active symptoms (Bronca, 2020). However, travellers, interprovincial and international, had been subject to new regulations including quarantines and required testing irrespective of the presence of symptoms.

With the initial wild-type virus, people infected with the virus typically start presenting mild symptoms 5-6 days into the maximum incubation period of 14 days (Backer et al., 2020; WHO, 2020c). As a result of infection, people can also develop more serious/life-threatening symptoms such as acute lung injury, acute respiratory distress syndrome, septic shock and multi-organ failure (Zhu et al., 2020b), all of which require mechanical ventilation and intensive care unit admission. Since these conditions require the attention of highly specialized healthcare professionals, and specific equipment and resources to treat, hospital surge was of concern as hospital resources such as beds and staff were limited. Therefore, at the start of the pandemic, controlling transmission was of utmost importance, especially since there was little known about the disease and its severity at the time.

Much of the drive to keep case numbers low was from the fear of potentially having to reproduce some of the drastic measures Italian health authorities had to take to contain the consequences of rapid widespread transmission, and the exhaustion of health services and lifesaving equipment. Italy has been described as one of the first countries in Europe to have been devastated by COVID-19 (Williams, 2020). While the country's health care system reported

having 3.2 hospital beds per 1000 people, the task of managing the influx of critical patients was impossible (Rosenbaum, 2020). Certain hospitals were forced to set and enforce age eligibility requirements to receive oxygen and mechanical ventilator support due to equipment shortages (Allen, 2020; Rosenbaum, 2020). This painted a grim forecast for Canada, given its 2.5 hospital beds per 1000 people capacity, and a demographic like Italy (The World Bank, n.d.).

To prevent an increase of infectious rates, which would put an unsustainable pressure on the health care system, public health measures and protocols were implemented. In the case of primary care settings, these measures affected normal operations with regards to how primary care providers delivered services to patients as per their scope of practice (Mihailescu et al., 2021; Stephenson et al., 2021). The Government of Canada (2012) defines primary care as a comprehensive approach to health care that goes beyond traditional diagnosing and treating. In Canada, the delivery of primary care services is team-based; physicians, nurses, and allied health work collaboratively to provide a coordinated array of services (GC, 2012). In this study, the primary care providers of interest were allied healthcare providers. As per Canada's classification, some examples of allied health providers include physiotherapists, respiratory therapists, occupational therapists, dieticians... (Hunter-Orange et al., 2004). Allied health providers working in the primary care setting have front-line experience, with ties to both the community and the larger health care system. It was deemed important to investigate how COVID-19 pandemic public health measures affected this group of workers due to the lack of existing literature on their experiences during this period.

1.1 Study Purpose

The purpose of this master's thesis was to gain an understanding of how the public health measures implemented in Manitoba and Ontario during waves 1 and 2 of the COVID-19 pandemic impacted allied health professionals working in primary care settings.

1.2 Study Objectives

1. To describe how mandated public health measures impacted primary care allied health professionals in their clinical practice.
2. To compare the impact of public health measures on the practice of primary care allied health professionals between Manitoba and Ontario.

1.3 Thesis Organization

This thesis will detail how the stated project purpose and objectives were achieved. The document moving forward is organized in these following chapters. Chapter 2 presents the results of the literature review. This chapter includes a discussion on how existing studies informed this project and presents the project's relevance and rationale. Chapter 3 explains the philosophical orientation and methodology of the project. It locates the project in the paradigm spectrum, outlines the methodology, and ends with the presentation of a conceptual framework, the Roy Adaptation Model, and explains how it was applied in this thesis. Chapter 4 details the methods used to collect and analyse the data that will be presented in chapter 5. Next, Chapter 6 discusses

the results and relates them to the existing literature. The thesis finishes with a concluding chapter, Chapter 7. References and appendices are found at the end of the document.

Chapter 2: Literature Review

This type of large-scale (global) pandemic has never been seen before. Existing literature informing this topic is new, with most of it having been published within the last two years. Given the widespread impact of this kind of event, the pandemic has proven to be a prevalent topic of research in all industries with new scientific contributions being published daily. The goal of this literature review was to identify articles exploring the experience of allied health professionals working in primary or community care settings during the COVID-19 pandemic, with particular emphasis on how the public health mandates instated by governing bodies affected their practice.

The literature search was conducted in November 2021 using the database Medline. Additionally, the references of relevant articles were manually searched for additional articles to include. The search strategy comprised of 4 sets of keywords, collectively grouped under the following headings: COVID-19, public health measures, allied health professionals, and primary care setting. See Appendix A for a complete list of the keywords.

2.1 Primary Care During COVID-19 and Public Health Measures

Primary care facilities and providers continued to serve their communities throughout the pandemic (Ashcroft et al., 2021; Donnelly et al., 2021). Since the primary care sector is the point of entry into the broader health care system, the roles of primary care providers were largely affected. First, the responsibility of detecting and monitoring COVID-19 cases was bestowed upon

them (Londoño-Ramírez et al., 2021). A study conducted in Spain¹ reported that primary care centres focused on detecting COVID-19 cases whereas hospitals and other secondary or tertiary care facilities focused on providing treatment to patients with more concerning statuses (Londoño-Ramírez et al., 2021). Once patients were no longer in the acute phase of the disease, it was the responsibility of primary care providers to manage and rehabilitate them (Sivan et al., 2020). Second, some primary healthcare providers were redeployed (Donnelly et al., 2021) However, in implementing reassignments, the health professional's expertise was not always considered by policy makers. This caused for some allied health providers to work redeployment roles that did not compliment their profession's specific skills and knowledge. Primary care providers in Ontario voiced that there was a lack of guidance on how to orient their respective roles within this new landscape of the pandemic (Donnelly et al., 2021). Finally, public health measures imposed on the public equally impacted daily operations in the primary care sector (Citarelli et al., 2021). Allied healthcare providers had to change their methods of service delivery. Primary care providers in Ontario shared that support was lacking in adapting roles to continue providing patient care in the restrictive environment created under the constraints of public health measures.

The findings of the literature review point to the common theme of “a new way of doing things” in the primary care setting. The peer reviewed literature presented the experience of healthcare professionals during the pandemic as a duality of action and reaction, with “the action” being the pandemic and the related implementation of public health measures and “the reaction” being the ways healthcare professionals adapted their practice to continue providing care whilst

¹ A country with a decentralized health system comparable to that of Canada with a division between primary care and tertiary care.

respecting the mandated measures. All articles addressed change and transformation of the primary care landscape. The remainder of this chapter has been organised following this duality. First, it addresses the series of public health measures (action), followed by the changes in practice that such public health measures caused (the reaction).

2.2 Public Health Measures Adopted Worldwide

2.2.1 Monitoring for symptoms

The limited numbers of incoming visitors were screened for symptoms upon entry to the clinic (Moey et al., 2021). Primary care clinic staff were made responsible for monitoring their symptoms and declaring their temperature (Moey et al., 2021; Moscrop, 2020). New regulations were created to address the risk of infection to staff and new action plans were developed. In Singapore, the Infectious Disease Act mandated that any staff member exhibiting symptoms go on 5-day sick leave (Moey et al., 2021).

2.2.2 Adopting more vigorous health safety protocols

Primary care providers were encouraged to engage in frequent handwashing, refrain from sharing equipment with colleagues, and change their clothes after work (Moscrop, 2020). Staff accrued additional responsibilities like disinfecting communal surfaces more frequently (Moscrop, 2020). However, it was the use of personal protective equipment (PPE) that was the most discussed change. Both patients and staff were required to wear masks while in clinic (Lim et al., 2021; Moscrop, 2020). At the provider's discretion, additional PPE such as gloves, eye protection,

and gowns were suggested if they suspected someone who presented with increased risk (Public Health Agency of Canada, 2021). However, despite the recommendations of governing authorities, sometimes availability of PPE was an issue.

Having access to the appropriate PPE was very much a health safety issue, especially for frontline workers like primary care providers. Healthcare workers were at an increased risk of contracting COVID-19 when there was a lack of access to adequate PPE and when workers were made to re-use PPE (Nguyen et al., 2020). The availability of such resources also had an impact on the psychological wellbeing of healthcare providers (Kisely et al., 2020). Lack of access to PPE was one of the top reasons for heightened anxiety among primary care providers. This anxiety stemmed from the worry of being infected and spreading it to others, such as loved ones (Siddiqui et al., 2021).

Access to adequate PPE was also associated with the level of preparedness healthcare workers felt with working during the pandemic. Indeed, Fernandez & Lotta, (2000), found that community health workers felt unprepared working during the pandemic due to a lack of access to the appropriate supports and resources like PPE (Fernandez & Lotta, 2020). However, in comparison, physicians, and nurses (professions that had increased access to PPE) did not share the same degree of anxiety and unpreparedness (Lotta et al., 2020). Disparities in resources and support allocation between different professions and between different sectors of care occurred, resulting in different professions having different experiences (Londoño-Ramírez, 2021; Lotta et al., 2020).

2.2.3 Reducing clinic traffic and minimizing in-person contact

When working in-person in clinic, staff adhered to social distancing measures (Moey et al., 2021). Staff meetings transitioned from being in person to being conducted virtually (Moey et al., 2021; Moscrop, 2020). Staff and patients were encouraged to keep a minimum distance of six feet from one another (Lim et al., 2021). The workplace setting was structurally changed as barriers were put up and workspaces were rearranged to respect physical distancing (Lim et al., 2021; Moey et al., 2021). Limiting in-person contact changed the way providers engaged with their patients and colleagues (Fernandaz & Lotta, 2020; Lim et al., 2021).

In times of high case numbers, primary care staff were encouraged to work from home (Bentham et al., 2021; Moey et al., 2021). Technology suddenly became heavily relied upon to facilitate this shift and support providers in continuing to service patients remotely. Instead of coming in person to primary care clinics, patients connected with providers via virtual options: phone, video, email, mobile applications, and/or text-message (Bearne et al., 2021; Breton et al., 2021). The transition to virtual care was abrupt. For example, non-physician interprofessional care providers working in Family Health Teams in Ontario reported that 77% of patient interactions took place in person before COVID-19 but after the start of the pandemic, there was a complete switch with 76.5% of patient interactions taking place over telephone (Donnelly et al., 2021).

2.3 Changes in Practice Due to Public Health Measures

2.3.1 Change to virtual care

Virtual care has been advantageous for both providers and patients (Donnelly et al., 2021). Providers, during the pandemic, commended virtual care for its convenience and effectiveness in reducing wait times and allowing more frequent follow-ups (Breton et al., 2021). Delivering services remotely was a big part of the experience of primary care providers working during the pandemic (Breton et al., 2021).

Certain interventions delivered remotely have proven to be equally as effective as when delivered in person (Sarfo et al., 2018). For example, Enabling Self-management and Coping with Arthritic Pain through Exercise (ESCAPE-pain) transitioned to providing intervention remotely (Sarfo et al., 2018). Findings showed similar desired outcomes of improved physical function and reduced pain with the program being conducted remotely versus in person (Bearne et al., 2021). Another case study illustrated how an occupational therapist was able to help a patient use the Canadian Occupational Performance Measure entirely virtually and avoid hospitalization (Sclarsky & Kumar, 2021). Sometimes, depending on the condition like post-stroke depression, remote care was even more effective in comparison to in person treatment (Sarfo et al., 2018). In general, the premise of telerehabilitation offers flexibility, accessibility, and financial feasibility (Bearne et al., 2021; Grona et al., 2018). Interventions via telehealth have been met with high patient satisfaction (Gilbert et al., 2020; Grona et al., 2018). Despite the well-documented benefits, there were still some concerns about providing care remotely. Barriers to accessing or using technology was a prominent concern (Breton et al., 2021; Donnelly et al., 2021).

The transition from delivering services in person to virtually was sudden and both providers and patients had to adapt to a way of practice that was previously not as widely adopted (Breton et al., 2021). For primary care teams, the shift was characterized as done with “little to no preparation” (Ashcroft et al., 2021). Canadian providers voiced a lack of training in providing virtual care. In a survey, less than half of the primary care non-physician interprofessional care provider sample reported receiving training for virtual care. 57% of the sample said receiving additional training would be preferable (Donnelly et al., 2021).

Virtual care has been more compatible with some professions than others which ultimately affects the experience of the provider (Donnelly et al., 2021; Klamroth-Marganska et al., 2021). For example, virtual care has been shown to be more compatible with the work of occupational therapists versus midwives, i.e., more occupational therapists reported a positive experience with providing care remotely whereas more midwives reported a negative experience (Klamroth-Marganska et al., 2021). Moreover, virtual care has been more compatible with certain types of patients. For example, patients with mobility and/or geographic challenges were able to access medical services more readily than in person (Breton et al., 2021; Donnelly et al., 2021).

Despite the challenges faced during the adaptation period, virtual care has been reported as having a foreseeable continued presence in the primary care setting. In a survey, many primary care providers reported that they planned to continue to use telehealth to connect with patients after the pandemic (Breton et al., 2021). The forced shift to virtual care facilitated the growth of its implementation into different care settings for different professions that were previously restricted. Before the pandemic, the usage of telehealth relied on several factors including policies, funding models, jurisdiction, and stakeholder regulations like insurance company policies (Breton

et al., 2021; Grundstein et al., 2021; Oliveira Hashiguchi, 2020). In Australia, due to the pandemic, physiotherapists working in primary care settings started using telehealth, which was not previously allowed (Stanhope & Weinstein, 2020). In another example, Medicare, a government funded insurance program in the United States of America, granted physiotherapists and occupational therapists' eligibility to provide and bill for services via telehealth, which they did not have prior the pandemic (Grundstein et al., 2021). Current arguments are being made for remuneration models and insurers to continue supporting the use of telehealth by previously excluded allied health professionals (Grundstein et al., 2021; Stanhope & Weinstein, 2020). In efforts to reduce COVID-19 transmission, working from home measures facilitated the widespread implementation of virtual care into professions and settings that previously experienced barriers.

2.3.2 Changes in role and services

The role of allied health professionals changed in many respects including hours of operation, workload, and service delivery (Moey et al., 2021). During periods of lockdown in Singapore, services provided by allied health professionals were deemed non-essential services and stopped (Moey et al., 2021). Similarly, due to public health measures of social distancing and reducing clinic traffic, in person contact with patients was restricted which led to role alterations (Moey et al., 2021). For example, community health workers in Brazil were instructed to stop doing home visits, which encompassed a large part of their job. As a result, they ended up taking on more administrative duties (Lotta et al., 2020). Another example of role adaptation was in the case of mental health service providers working in Family Health Teams in Ontario who had to

take on new responsibilities such as conducting check-in calls to manage the newly growing demand in their services due to the stress of the pandemic on patients (Ashcroft et al., 2021).

Some professions experienced a complete role change (i.e, being redeployed). Others experienced a role reduction or a role expansion with an increased workload, while some alternatively did not experience much of a change (Donnelly et al., 2021). In Ontario, only 20.5% of non-physician interprofessional primary care providers were redeployed (Donnelly et al., 2021). So, the experiences of primary care providers were not uniform with some professions forced to adapt more than others.

In addition to a change in the way services were delivered and from where, there was also a change in the services in demand. Before the pandemic, primary care facilities were already providing mental health supports (Donnelly et al., 2021). During the pandemic, the need for mental health services further increased while the demand for care of other chronic conditions decreased, resulting in a noticeable growth in the waitlist for mental health services (Ashcroft et al., 2021; Donnelly et al., 2021). Primary care providers agreed that the mental health of their patients had declined., and patient populations were reported to be experiencing increased anxiety, isolation, and fear (Ashcroft et al., 2021). During the pandemic, Ontario interprofessional primary care providers were increasingly engaged with providing increased support in mental health, supporting resource navigation, navigating food insecurity, and addressing social isolation. There was a change in patient needs from addressing physiological conditions like diabetes and cardiovascular disease to more mental and socioeconomic ones (Donnelly et al., 2021). For example, physiotherapists that worked with patients with muscular dystrophy noted that their patients' needs were more psychological than physical after the onset of the pandemic (Citarelli et al., 2021).

2.3.3 Change in management support and resources

Management support was also a source of disparity between countries. In Singapore, primary care clinic personnel received frequent updates from local management and public health authorities (Moey et al., 2021). Staff were provided with training on hygiene, PPE and PPE disposal. Staff underwent mask fitting and those who were unable to find a fit were exempt from being redeployed to sites with outbreaks of severe intensity. Conversely, in Brazil, the Ministry of Health did not assist with the procurement or distribution of PPE (Fernandez & Lotta, 2020). Rather, local authorities were left responsible for securing PPE for their workers. Healthcare worker preparedness was better when the perception of support and guidance from supervising authoritative bodies like government or local management was better (Fernandez & Lotta, 2020). Inadequate support was reported as a reason why community health workers in Brazil felt unprepared and scared during the pandemic (Fernandez & Lotta, 2020).

The provision of resources was another area of importance. Community health workers were more disadvantaged than other professions like doctors or nurses (Lotta et al., 2020). In Brazil, community health workers were subject to poorer working conditions as they received less support from leadership, less access to PPE, less access to COVID-19 testing, and received less training in comparison to their counterpart doctors and nurses. Consequently, they felt much less prepared (Lotta et al., 2020). In the future, the expectation is for improved coordination and increased presence from management and governing groups (Siddiqui et al., 2021).

Healthcare workers in Ontario reported an increase in patient demands but no changes in the resources available (Ashcroft et al., 2021). Workforce was key in this period of crisis. Singapore authorities employed strategies like prohibiting all official and non-essential travel and

leaves to maintain full volume of the workforce (Moey et al., 2021). The primary motive was to reduce staff burnout and avoid overworking them. Restricting staff leaves helped with improving overall adherence to public health measures and led to better mental health outcomes for staff (Kisely et al., 2020; Moey et al., 2021).

2.3.4 *Changes to team dynamic*

In addition to these changes in role and care, the pandemic also impacted the way primary care team members communicated amongst themselves (Moscrop, 2020). Co-locating teams allows for easy and frequent communication between providers, increases awareness about the work of colleagues and increases collaboration to provide more coordinated care to patients (Lim et al., 2020; Cramton, 2001). COVID-19 public health measures created distance between team members and patients. With team members working from home and the reconfiguration of workspaces, most of the communication shifted to electronic methods (Lim et al., 2020; Sullivan & Philips, 2020). There no longer were in person staff meetings (Moey et al., 2021). The composition of teams was also rearranged with some staff being displaced entirely outside of the clinic due to redeployment (Sullivan & Philips, 2020).

In Ontario, the pandemic negatively affected primary care teams in aspects of communication, team perception, and awareness regarding the work of other team members (Lim et al., 2020). Team members noted that the frequency of communication decreased. Communication via electronic methods involved an increase in workload, an increase in delays, and an increase in formalities (Lim et al., 2020). Team members also became less aware of what other team members were doing and where they were situated. As a result, team perception

diminished with members working at different locations whether it be at home, in a different part of the clinic, or at a redeployment site (Lim et al., 2020). The relationships between team members were affected due to a lack in social activities like eating lunch together or gathering in break rooms (Lim et al., 2020; Moey et al., 2021). Primary care team providers expressed feeling isolated and had lower work satisfaction due to the reduced social contact (Donnelly et al., 2021; Lim et al., 2020).

However, physically distancing team members did lead to increased productivity (Lim et al., 2020). In a study based in Ontario, nearly half of the non-physician interprofessional sample reported that the shift to virtual care facilitated an increase in collaboration and shared how the team worked together to overcome challenges (Donnelly et al., 2021). Primary care teams have unique dynamics and so the experiences of these teams were not reported as uniform. Some teams saw an increase in collaboration, while others saw a decrease, or no change (Donnelly et al., 2021). Team building efforts remain important to encourage trust and connection between team members to maintain team wholeness especially during a time like the pandemic, where worker isolation can happen (Donnelly et al., 2021; Sullivan & Philips, 2020).

2.3.5 Change in mental health

Isolation is just one of the many emotions primary care providers struggled with during the pandemic. They felt scared, anxious, worried, uncertain, undervalued, unprepared, exhausted, depressed, and burned-out (Ashcroft et al., 2021; Donnelly et al., 2021; Fernandez & Lotta, 2020; Mackworth-Young et al., 2021; Siddiqui et al., 2021; Smallwood et al., 2021). On the contrary, a

handful of professionals described feeling a greater sense of purpose with being able to help others through this crisis and contribute in the response to the pandemic (Donnelly et al., 2021).

In comparison to secondary and tertiary care settings, providers working in primary care settings experienced the greatest increase in anxiety during the first few months of the pandemic (Londoño-Ramírez et al., 2021; Siddiqui et al., 2021). The unknown nature of COVID-19 as a disease was fear provoking for care providers (Lotta et al., 2020). The increased anxiety in this care setting can be explained, at least in part, due to primary care services being the first point of entry into the larger health network, including where most acute respiratory infections are first identified (Londoño-Ramírez et al., 2021; Moey et al., 2021). Primary care providers were anxious about potentially getting infected and then further spreading it to their families. Nearly 75% of frontline healthcare workers reported their relationships with family, friends, and colleagues had changed because of the fear of infecting loved ones (Smallwood et al., 2021).

Some of the other sources of anxiety included too much information available with questionable accuracy, uncertainty regarding practice given rapidly changing regional and national policies, deprioritizing of certain patient health conditions with reducing care provisions, changes in elements of work setting, and lack of leadership from governing bodies (Citarelli et al., 2021; Mackworth-Young et al., 2021; Siddiqui et al., 2021).

More primary care providers than secondary or tertiary hospital personnel shared they lacked access to mental health supports for themselves (Siddiqui et al., 2021). The public health measures and associated COVID-19 regulations were physiological in focus and lacked support and guidance regarding social and emotional wellbeing (Donnelly et al., 2021). In the future, healthcare workers in the primary care setting requested having additional support for providers in

the workplace with streamlined information on COVID-19, clearer promotion of resources available, and barrier-free access to PPE (Siddiqui et al., 2021). Specific to mental health supports, in the first months of the pandemic, providers reported wanting access to professional psychological services, more opportunities to connect with colleagues, wellness promoting activities like yoga, and a staff only support line (Lim et al., 2020; Siddiqui et al., 2021).

2.4 Discussion

The intent of this literature review was to identify the existing research on how public health measures in response to the COVID-19 pandemic have impacted allied health professionals working in primary care settings. The onset of COVID-19 introduced a new and unknown stressor on the health care system. New and rapidly evolving policies were introduced, with mandated public health measures being widespread and highly impactful on the daily practice activities of primary care professionals. The findings of this literature review identified that many elements of the primary care sector were re-designed. This discussion will elaborate on how the findings of the literature review informed this project.

The findings provided a general overview of the different public health measures primary care providers were subjected to. Providers had to adhere to increased safety protocols like frequently sanitizing shared spaces and mask wearing, and mandates like keeping a six feet distance from colleagues and patients. The reaction in response was change. The findings point to changes in role, work setting, service delivery, and resources. The existing literature has denoted a greater reliance on technology to maneuver around public health measures and continue providing care. The review detailed this implementation of remote/virtual care by presenting

provider perspectives, advantages, disadvantages, and future implications. However, depending on the nature of the profession, this new way of care was not always the best, for example, for professions that require more hands-on manipulation or relied on visual cues.

To add to this topic of role adaptation, the findings shared how the change in patient demands were also partly responsible for the change in the role of allied health professionals. These professionals were working to support their patients in ways they maybe had not before. In addition to this change in service delivery, the literature review findings also pointed to some of the other ways primary care allied health roles expanded during the pandemic. However, role expansion was not universal, as the findings also reported role reductions and complete role change like redeployment. Thus, while the literature review informed of role change, the insights were limited and superficial. For instance, the literature did not address questions such as: How did the provider's role change? What were some tasks they did during the pandemic but not prior to? Were they redeployed and if so, how was that experience? This thesis fills in some such gaps and further expands on this subject matter of changes to the role of primary care allied health professionals in response to COVID-19 public health measures.

The findings of the literature review highlighted the hierarchy that exists within the medical industry where those at the bottom, allied health and community health workers, were less protected. Allied health professionals, as compared to nurses and doctors, were provided with less resources and support. In settings where their roles were viewed as non-essential, they dealt with a greater extent of adaptation, while the same was not expected for some other professions. Though comparisons between different health care disciplines is not an objective of this thesis, this concept brings about questions on whether this unequal treatment has been reproduced in the allied health

realm. The findings of the literature review provided insight on the underlying causes of some of the challenges primary care allied health professionals have faced of possible relevance to this project.

Another central theme in the existing literature was the effect of public health measures on the workplace. Existing studies found a change in the atmosphere of the primary care work setting due to layout changes, changes in communication, and changes in colleague relationships. Given that the concept “collaboration” is characteristic of primary care, team functionality is important to consider. The findings informed that such changes in the workspace varied, on a spectrum from positive to negative.

The field of health care in general can be very emotionally burdening on healthcare workers. As per the literature review, the pandemic was a source of additional stressors. Primary care professionals reported feeling a wide range of negative emotions and voiced feeling unprepared in the wake of the pandemic. The increased risk of exposure due to them working on the frontline of the health care system was one explanation. This informed that during this project’s investigation, the discussion about the emotional impact was to be expected.

The findings of the literature review also revealed a general discontent with management, more specifically, with resource availability, support, and leadership. However, despite the overarching negative impression, the literature review offered limited information on management. This thesis was further intended to address this gap. Resources, especially those that protect providers like PPE was a notable theme within this topic of how public health measures affected primary care providers. Furthermore, much of the increased anxiety and feelings of unpreparedness of primary care providers was due to the lack of guidance from authoritative

bodies, locally, regionally, and nationally. The comparison between the Brazilian and Singaporean leadership styles demonstrates the differences in support provided to primary care healthcare workers. Given Canada's decentralized health care system, the pandemic response and thus the impact of public health measures across provinces, may vary.

As the pandemic unfolds in present time, the research on this topic continues to grow. This thesis further adds to this expanding pool. This master's thesis is relevant in several key ways. (1) It addresses a gap in the existing literature. The provider sample population represented in the literature review was not exclusively allied health as classified by Canada, as it also included community healthcare workers and other non-physician professions. Much of the literature review presented findings from foreign-based data. There was a gap in the amount of Canada specific information. There was very limited existing literature about the impact of public health measures on allied health professionals working in Ontario, and no such information specific to Manitoba. This thesis solely sampled allied healthcare professionals working in primary care settings in Ontario and Manitoba and provides Canada specific data and insights. (2) It researches a group of understudied healthcare professionals during a period of large-scale disruption, primary care allied healthcare providers in Canada. (3) It achieves project objectives by using a conceptual framework, Roy adaptation model, a methodology, case study, and a data collection method, diary entries, that are not as readily employed in health topics research. Thus, this thesis contributes by applying theory and longitudinal qualitative research design methodologies to explore this topic. (4) It provides insights on the management of the pandemic in the primary care sector in Canada. Due to Canada's decentralized health care system, the response to the COVID-19 pandemic was also quite decentralized. Provinces were entrusted with the responsibility of developing their respective COVID-19 response plan. Generally, the public health measures bore many similarities

interprovincially. However, how such public health measures were operationalized, and implementation timelines varied from province-to-province. Public health measures were repeatedly implemented, recanted, altered, and reinstated, especially between periods of re-opening and lockdowns. Waves 1 and 2 of the pandemic did not happen during the same time periods in Manitoba and Ontario. Therefore, healthcare professionals in these two provinces experienced the pandemic differently. Lastly, (5) it illustrates how health care policy can influence the adaptation and daily practice of specific healthcare professionals. The research design of this project is unique and allows for comparing cases between Manitoba and Ontario. A comparison interprovincially on this topic has not yet been completed.

2.5 Conclusion

This chapter of the thesis presented the findings of the literature review on how public health measures implemented during the pandemic affected the practice of primary care allied health professionals. It established the relevance of this project. The findings of this thesis highlight how policy changes and system instability have affected allied health providers in primary care settings professionally, within the first nine months of the pandemic. As this topic has never been investigated thoroughly in the Canadian health sphere, the findings of this thesis serve as a building block for future research to address gaps in research specific to allied health professionals during the pandemic. The next chapter presents the philosophical underpinnings and explains the application of the case study methodology and conceptual framework, the Roy Adaptation Model.

Chapter 3: Philosophical Orientation, Methodology and Conceptual Framework

This chapter of the thesis presents the philosophical orientation of the project. It begins by identifying the research paradigm components in which this project is situated. Next, I locate my assumptions and acknowledge my personal positions as a researcher. The latter half of the chapter is focused on detailing how the case study methodology was operationalized, and explaining the conceptual framework, the Roy Adaptation Model, and how it was applied in this project.

3.1 Philosophical Orientation

The ontological orientation of this project was idealism. The epistemological orientation of this project was constructivism. This philosophical approach thinks of both the participant and the researcher as co-creators in exploring aspects of lived experiences (Addington-Hall et al., 2007).

3.1.1 Ontology

Ontology speaks to the “nature of reality” (Creswell & Poth, 2018, p. 20). Idealism is characteristic of qualitative research and thus the approach applied in this project (Creswell & Poth, 2018, p. 20). “Idealism ... holds that we have direct access only to our ideas and subjective experiences, and no empirical access to the world beyond, except through these ideas.” (Giacomini, 2010, p. 129). In this project, the subjective perspectives of primary care allied health professionals were used to study the experiences of working during the pandemic. There was no

one singular reality (Slevitch, 2011). Each participant had their own reality of working during the pandemic. No one reality takes precedence over another, instead these realities co-exist.

3.1.2 Epistemology

Epistemology describes the philosophical interest in how knowledge is created and how such collected knowledge is made sense of (Levers, 2013; Scotland, 2012). The epistemological approach of this study was constructivism. Constructivism is rooted in sense making (Lincoln & Guba, 2013). Merriam and Tisdell's (2016) definition of qualitative research is a good description of constructivism: the core interest is "how people interpret their experiences, how they construct their worlds, and what meaning they attribute to their experiences" (Merriam & Tisdell, 2016, p. 15). Constructs are relied on in the sense-making process to organize one's lived experiences. Constructs are not conceptualized in an isolated context. Sense-making involves drawing on past experiences, social and historical contexts to interpret the present (Lincoln & Guba, 2013). Thus, sense-making is both personal and social. For example, a respiratory therapist's experience of working during the pandemic will be similar in some respects to that of another respiratory therapist because they both share a similar responsibility and education. But their lived experience, and the meaning they will attribute to it will defer because of their various context: where they work, who they work with, and their past experiences.

Constructivist research involves a researcher or group of researchers interpreting people's constructions. Existing conceptual frameworks can be imported to aid in the analytic process as a way to organize the experiences of the group of interest (Lincoln & Guba, 2013). In this project,

Roy's Adaptation Model served as an imported construct (described in section 3.3) and was applied to interpret the subjective experiences of primary care allied health providers.

3.1.3 Position of researcher

Reflexivity starts by disclosing the positionality of the researcher. It invites transparency as the researcher's worldview affects data interpretation and presentation. This next section is me (the researcher) locating my personal position, identifying my assumptions, and sharing my previous research experience. As per Haraway, when a researcher situates their knowledge such as this, they re-claim their agency (Haraway, 1991).

The concept of a researcher adopting an objective viewpoint is an illusion as their respective outlook merely gets labeled as objective. Haraway (1991, pp. 183-201) presents that there is no absolute objectivity. Haraway (1991, pp. 183-201) explains knowledge must come from somewhere, and that our current understandings are shaped under the constraints of an existing dominant ideology. The acknowledgement of perspective must be present as no one can view the world from a purely passive standpoint.

I would like to acknowledge my assumptions on concepts central to this project which include the social impact of the pandemic, the role of primary care settings, and the experience of healthcare workers during the pandemic. The greatest change in my life due to the pandemic was working on this project remotely so I relate to the struggles of working from home easily. Even then, the transition was smooth as I am well versed technologically. My social life was also impacted greatly due to limiting in person contact with family and friends. I am very consciously aware of the change in relationships. The isolation and lack of social engagement impacted my

mental health and I suspect the mental health of healthcare workers was an area of concern given not only the social separation from supports systems but the high-risk nature of working during a pandemic. I have an educational background in health sciences, and I've learned about the different health systems and structures. In reflecting about primary care teams, I know the professionals working in this setting have closer ties to the community. They were at an increased risk of transmission and likely more burdened with their patient's worries and questions about the virus. The impact of public health measures on the collaborative nature of primary care teams was also at the forefront of my mind. I hypothesized there to be a change in team dynamic with more professional and personal distance between colleagues. In general, with respect to how the pandemic public health measures has affected allied health primary care professionals, I anticipated change in roles, services, relationships, and processes. In analyzing data, I was aware of this predisposition to being more inclined to notice change, and so I remained open minded to the possibility of things remaining stagnant. Lastly, I felt slightly disadvantaged with never having had clinical experience and only learning about the functioning of primary care settings and the roles of such professionals from an academic standpoint.

Prior to the pandemic, I was planning to conduct a research project on lung transplantation patients using a phenomenological approach. When the pandemic hit, I was on a third draft of my thesis proposal. Unfortunately, because restrictions persisted, I had to completely change the focus of my master's project. When my supervisor, Dr. Louise Chartrand, proposed to work on the broader project that this study was a subset of, I accepted. However, this also meant that I had to completely start from scratch with writing and presenting a new the project proposal.

I am a novice researcher. As for my prior research experience, I have participated in data collection and data analysis in both qualitative and quantitative research. This was my first

qualitative research project where I was involved in designing all components. I relied on my supervisor, Dr. Louise Chartrand, for guidance on proponents of this thesis. This study was situated within a larger project and sought to achieve its objective 2.2, to compare the experiences of primary care rehabilitation professionals by province (Manitoba compared to Ontario). I worked on the larger project in participant recruitment, conducting a literature review, transcribing audio diary entries, developing and piloting interview guide, conducting interviews, making participant case summaries and coding data using NVivo.

3.2 Case Study Methodology

I applied case study methodology in this project. This methodology is best applied when a researcher is limited in the degree of control over the phenomenon of interest, and when there is limited existing knowledge and theories informing the phenomenon of interest (Crowe et al., 2011; Ebneyamini & Sadeghi Moghadam, 2018; Yin, 2014). A pandemic of this magnitude has never happened before. Province-wide restrictive public health measures were never enforced on the masses before. There was limited existing literature on primary care allied health professionals working during a pandemic. Thus, this methodology was the most fitting for this project's subject of inquiry.

3.2.1 Defining the case and type of case study research

The focal point of case study methodology is investigating a "case" in-depth. The aim is to develop an understanding of the phenomenon of interest within its real-life context and present its key characteristics (Crowe et al, 2011; Njie & Asimiran, 2014). As per Stake (1995), a case is a

‘bounded system’ (p. 2). Merriam expands this definition by adding that a case has boundaries (Merriam, 1998, p.27). These boundaries contain the phenomenon of interest: the event within a specific time, geographical location, and social group (Crowe et al, 2011). In this thesis, the case was how COVID public health measures (the event) in response to wave 1 and wave 2 of the pandemic (time) affected allied health professionals (social group) working in primary care settings in Manitoba and Ontario (geographical location).

There are many different types of case studies. Different scholars have developed their respective criteria to classify case studies based on several elements including time, number of cases, line of questioning, or desired outcome (Ebneyamini & Sadeghi Moghadam, 2018; Starman, 2013). Using Stake’s (1995) labels, this research project was an intrinsic case study. An intrinsic line of inquiry is focused on learning more in-depth about a specific case rather than seeking to generate theories or generalize study findings (Hancock & Alogozzine, 2006, p.34; Stake, 1995, p. 3). Similarly, the goal of this project was to learn more about the experiences of primary care allied health professionals working during the COVID pandemic. This study included a total of four cases, and thus is referred to as a collective intrinsic case (Stake, 1995). The term “collective” and “multi-case” are often used interchangeably; they both signify more than one case is studied.

3.2.2 Conceptual framework in case study

Case study methodology works well with a theoretical framework to systematically organize the data and interpret it (Hartley, 2004, p. 324). In this thesis, the conceptual framework of the Roy Adaptation Model provided this support. This model and how it was applied in the context of this project is detailed in the following section.

3.3 Conceptual Framework

Sister Roy Callista, a nurse and an academic, constructed the Roy Adaptation Model to reflect her view that people are holistic adaptive systems that respond to changes in their environment (Roy, 2008, p. 25). This framework and its application to this project in guiding data organization and orienting data analysis is described below.

3.3.1 Grounding principle of the framework

The Roy Adaptation Model is founded on the principles of humanism and veritivity (Roy, 2008, p. 27). Humanism is centred on the concept that an individual's subjective experiences create knowledge and value (Roy, 2008, p. 28). In this project, the experiences of the primary care allied health professionals were the source of knowledge. The reality of an individual is unique given their needs but there still exists an interdependence in discovering the truth as people share common needs (Roy, 1988). The individual points of view act in a sense of togetherness to uncover reality (Roy, 1988). Though the experiences of the participants varied, their individual realities shared some overarching common themes, for example, a change in role responsibilities or a change in work setting. These principles that underlie the Roy Adaptation Model align with the epistemological approach of this project, constructivism. Humanism as explained by Roy focuses on subjective experiences to conceptualize reality as does constructivism.

Veritivity, a term developed by Roy, further adds to the humanist concept of purposefulness (Roy, 1988). Veritivity speaks to individuals having purpose in their existence. Their life is meaningful, and their activity and creativity are for the common good of mankind (Roy, 2008, p. 28). Roy argues that commitment and caring stems from veritivity. To relate this to

healthcare professionals, Roy believes it is because of this shared value of caring that people choose such a career path (Roy, 1988). As aforementioned, despite the overall increased anxieties of working during the COVID-19 pandemic, some healthcare professionals reported contentment with helping during such an event (Donnelly et al., 2021). Similarly, another study based on another past pandemic showed healthcare workers displayed a willingness to work due to a sense of duty to help (Ives et al., 2009).

In addition to purposefulness, the concept veritivity includes unity. Roy views the peak of knowledge achievable via integration (Roy, 1988). The goal is to unite the existences of others. Like the principle of interpersonal relationship in humanism, veritivity is about all individual purposes collectively contributing to make a whole and purposeful universe (Roy, 2008, p. 28).

3.3.2 Scientific assumptions

The scientific grounding of the Roy Adaptation Model is supported by the von Bertalanffy's 1968 general systems theory and Helson's 1964 adaptation-level theory (Roy, 2008, p. 27). It is due to the general systems theory that Roy adopts this view of individuals being adaptive systems (Roy, 2008, p. 30). The stimulus of the environment as an input and behaviour as an output in the Roy Adaptation Model, are concepts that stem from this systems theory (Roy, 2008, p. 31). Secondly, the adaptation-level theory presents how individuals being adaptive systems are capable of positively reacting to changes due to situational demands or internal resources in their environment (Roy, 2008, p. 31). This theory's influence on this model is most prominent on the concept of adaptation (Roy, 2008, p. 31).

3.3.3 The principle of adaptation

As per Roy, adaptation is the process of consciously and with awareness making active choices to integrate oneself with the environment (Roy, 2008, p. 28). The concept of individuals being adaptive systems permits a way to see how individuals relate to others in their surroundings, whether it be colleagues, family members, or organizations (Roy, 2008, p. 32). More specifically, Roy uses holistic as characteristic of adaptive systems. The use of the terminology “system” is also important to note as it reflects the effect and affect relationship between people and the environment. The conscious acts of people in response to changes in the environment equally affect the environment itself (Roy, 2008, p. 32). This reciprocity is most easily described as feedback (Roy, 2008, p. 33).

In the context of this thesis, as per the existing literature, it was assumed that allied healthcare professionals working in primary care settings adapted their practices due to the changes brought by COVID-19 public health measures. Consequently, the way these professionals interacted with others in their space was impacted. Relationships between colleagues, family, friends, patients, and clinic management were subject to be altered. In addition, the perception of leadership and authoritative bodies like government agencies and regulatory associations was also altered. Healthcare workers were relied upon heavily to combat the pandemic. Whether they experienced changes like delivering services virtually or more drastic ones like redeployment, their actions were in a united front with the purpose of reducing transmission. Their adapted behaviours were meaningful as they continued to support their communities, provided care, and served in duty during the pandemic. In many ways, the adaptive behaviour of these healthcare workers, as a result of changes in demands of environment, also affected such said environment. For example, as per the literature review, results showed healthcare professionals requested for increased supports,

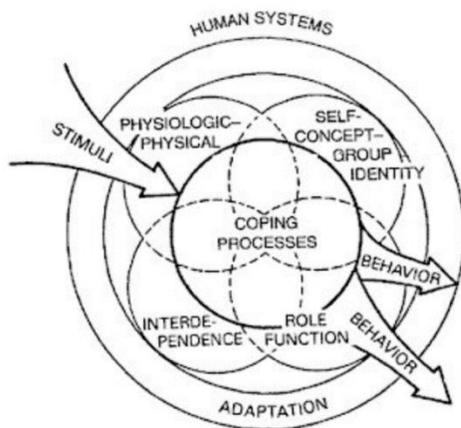
whether it be in form of resource availability or to accommodate a shift in health demands. Another example is how healthcare professionals wanted to continue to integrate virtual care into their practice post pandemic (Breton et al., 2021). All these adaptations impacted the landscape of health care post-pandemic. Research on the pandemic period, including the findings of this thesis, showcase how the adaptations influence future pandemic planning and future health care delivery.

3.3.4 Roy Adaptation Model and application

In a concise overview, the Roy Adaptation Model consists of (1) environmental stimuli as an input into the model, (2) 4 adaptive modes, and (3) adaptive behaviour as an output. See figure 1.

Figure 1

Roy Adaptation Model (Roy, 2008, p. 45)



Stimuli is the input for this model. It stems from the environment and is what elicits the need to adapt (Roy, 2008, p. 33). There are three types of stimuli: focal, contextual, and residual

(Roy, 2008, p. 34). Focal stimulus is at the forefront of an individual's awareness and has the greatest impact (Roy, 2008, p. 35 & p. 37). This type of stimuli calls for the use of resources (Jennings, 2017). Focal stimulus was of most relevance in the application of this model to this project. In the context of this project, the focal stimulus was the public health measures in response to the COVID-19 pandemic instated by governing bodies.

To cope with the stimuli, Roy presents two subsystems, stabilizer and innovator. The stabilizer refers to system maintenance through established structures and processes like daily activities (Roy, 2008, p. 42). The innovator refers to evolving social systems through structures and processes that invite cognitive and emotional growth (Roy, 2008, p. 43). However, the reaction within these subsystems cannot be directly recorded as these are merely processes. Rather, the adaptive behaviour in response to the stimuli is reflected in four adaptive modes (Roy, 2008, p. 43). The framework indicates that coping occurs through the interaction of the four adaptive modes: physiological, self-concept/group identity, role function and interdependence (Roy, 2008, p. 42-43). The following will present of each four modes and how it was applied in this project.

The role function mode views roles as a means for group membership, therefore individuals that have ascribed or acquired a common role. This role is to work collectively towards achieving the goals of the system (Roy, 2008, p. 44). In the interest of this thesis, the goal of the system was to reduce COVID-19 transmission with the implementation of public health measures being the forefront strategy. The roles of allied health primary care providers were adapted to accommodate such measures and re-configured so they could continue to care for their communities while they also assisted in the pandemic response. In the role function mode, there are two subcomponents of relevance: primary role and instrumental behaviour. The 'primary role' is an ascribed role(s) (Roy, 2009, p. 359). In application to this project, the notion of 'primary role' was used to explain the

roles and responsibilities of primary care allied health professionals prior to the pandemic. The second subcomponent is ‘instrumental behaviour’ which is goal-oriented behaviour (Roy, 2008, p. 359). In this case, the goal was pandemic response which included compliance to public health measures. In application to this thesis, the label of ‘instrumental behaviour’ identified the new roles and responsibilities taken up by primary care allied health professionals to contribute to the pandemic response as organized by governing bodies. Though healthcare professionals adopted new ‘instrumental behaviours’ during the length of the pandemic, they also continued to practice their primary roles, just in an adapted way. However, adaptation to the primary role is not presently a subcomponent in this mode. Thus, I added this new subcomponent, ‘adapted role’, to capture how healthcare professionals became accustomed to some of the transformations imposed by the pandemic. Therefore, in application to this thesis, the ‘adapted role’ subset captured primary roles being practiced in a modified way as to continue servicing patients while still abiding by public health measures.

The *group identity mode* concerns the shared relations within a group (Jennings, 2018). This mode encompasses beliefs of oneself, group self-image, and social and cultural environment (Roy, 2008, p. 95, 97). In application to this thesis, this mode provided information on how public health measures affected the provider’s professional identity.

The *interdependence mode* is focused on relationships and the reciprocity of support (Fawcett, 2009; Roy, 2008, p. 44). The subcomponent in this mode that was relevant to this thesis was ‘support systems’ (Roy & Andrews, 1999, pp. 474-475). This subcomponent includes support in the form of physical resources or support from people or organizational groups (Roy & Andrews, 1999, p. 475). In this project, the subcomponent of ‘support systems’ targeted the supports and resources, or the lack thereof, provided to primary care allied professionals to assist

them with adapting to working during the pandemic. In the primary care setting, a lot of support comes from fellow team members. This subcomponent highlighted how public health measures affected the relationships between the professional and their team. It also highlighted the supports provided to the professionals by other key groups like clinic management and governing authorities.

Lastly, the fourth mode, *the physiological mode* refers to the processes and structures that contribute to the physiological functioning of the body (Roy, 2008, p. 90). Roy lists a total of nine subcomponents in this mode. In application to this project, only three of them were of relevance: protection, activity and rest, and senses. The first subcomponent, ‘protection’, refers to the body’s capacity to protect itself against foreign substances (Roy, 2008, p. 200). This can be achieved internally, with the immune system, or externally, with PPE or respecting public health measures. Since COVID-19 is a transmissible disease, primary care allied health professionals were at risk of getting sick. The subcomponent of ‘protection’ focused on how they protected themselves, for example, with PPE. The second subcomponent, ‘activity and rest’, entails balancing physical mobility and acts of restoration to maintain optimal body functionality (Roy, 2008, p.90). The potential of burnout has always been a threat to workers in the health care industry (Dyrbye et al., 2017). The pandemic created more demanding expectations on primary care allied healthcare professionals to contribute to pandemic response. In this project, the subcomponent of ‘activity and rest’ looked at the physical and mental taxations of these professionals. Finally, the subcomponent of ‘senses’ refers to the body’s senses like vision, hearing, and feeling (Roy, 2008, p. 224). In relation to this project, the subcomponent of ‘senses’ focused on the emotional reactions of providers whilst working during the pandemic.

As per Roy, coping happens through the interaction between these four adaptive modes (Roy, 2008, p.42). The result of coping through these adaptive modes is adaptive behaviour which is the output of this model (Roy, 2008, p.43). This model does allow for the assessment of the efficacy of the resulting adaptive behaviour in response to the stimuli, but this was not applied in the circumstance of this thesis as it is out of the objective scope. This project was about investigating the experience of allied health primary care providers during the pandemic. The results were not meant to have any value judgement, but rather describe how healthcare professionals reacted and kept practicing their respective profession during a public health crisis.

3.4 Conclusion

This chapter of the thesis presented the philosophical orientation and the conceptual framework that guided data interpretation. The philosophical perspective aligns with the methodology and conceptual framework. The epistemological grounding of this project was constructivism. The methodology used in this project was the case study approach. The premise of using this approach was to look at a bounded system, or a case. Considering objective 2 of the project (a comparison between two provinces), this methodology was useful to describe what happened to each professional and to compare their experiences. Furthermore, it aligned well with the epistemological approach of constructivism as the respective contexts of each case are thoroughly described. Finally, the modes of the Roy Adaptation Model were used to organize each of the four cases included in this project. As mentioned previously, there was no value judgement (good adaptation vs. bad adaptation), but rather this conceptual framework served as a facilitator for describing adaptation. The Roy Adaptation Model also aligned well with the constructivist epistemology because it acts as an imported construct used to organize the subjective

experiences of the participants. This summarizes the theoretical/conceptual grounding of this project; the next chapter will describe the study design used to gather and analyze collected data.

Chapter 4: Method of data collection and analysis

This chapter of the thesis details the study design that was implemented to achieve the project objectives. As mentioned before, this project was subset of a larger project. Therefore, some of the sections below are discussed in relation to the larger project. Please refer to Appendix B for additional information on the larger project. This chapter will present the ethical considerations and explain how the participants of this project were sampled. It will also explain the methods of data collection, and the process of data analysis.

4.1 Ethics

Ethics approval for the larger study was approved by the Research and Ethics Board of the University of Manitoba on June 3rd, 2020 (certificate: HS23987). As a student researcher, I was responsible for writing an amendment pertaining to the use of a computer software to analyze qualitative data, i.e., NVivo. The amendment was approved.

One of the particularities of the larger project was that the principal investigators were given approbation by the ethics board to start the project before getting the full HREB certificate. The conditions were that the principal investigators were allowed to actively recruit participants and permit them to begin recording their audio diary, as long as the entries were not sent to the investigators prior to getting full approval. Only after full approval were the principal investigators and the rest of the research team allowed to access the audio diary data. This was both an advantage and disadvantage that will be further addressed in the upcoming diary method section of this chapter.

4.2 Sampling

The sample for this thesis project was done purposefully from a larger pool of participants. Recruitment for the larger study involved word of mouth, social media posts, outreach to colleges and regulatory associations of the allied health professionals of interest: respiratory therapist, occupational therapist, and physiotherapists. For this project, 4 participants out of 16 participants from the larger study were selected. Principles of purposeful sampling were applied to decide which cases were included. The cases were selected based on the following criteria: (1) only participants with both diary and interview data were considered (16 participants submitted audio diaries and 13 out these 16 participants also did an interview), (2) quality of diary, (3) comparability of role² and (4) redeployment. The process for case selection was made sequentially. As per the second criterion, the diary that was both high quality and descriptive was Jenny. She thoroughly addressed the provided question prompts in each diary entry. Her answers were detailed, often going beyond the facts, also sharing her emotions about the matter and her opinion. Jenny was a respiratory therapist in Ontario. The high quality of her diary might be attributed to her near 20 years of clinical experience as a respiratory therapist. As per the third criterion, comparability of role, Jenny's respiratory therapist counterpart in Manitoba, Ainsie, was selected. As per the fourth criterion, Jenny and Ainsie both experienced bouts of working at their primary care clinics while being redeployed. Maria was the third case to be selected. She was an occupational therapist in Manitoba. As per the second criterion, large portions of Maria's diary entries were dedicated to her sharing the activities of daily practice in clinic in detail. She was also

² The professions of providers across provinces had to match, for example, if a respiratory therapist was included in the Ontario sample, a respiratory therapist had to be included in the Manitoba sample.

redeployed like Ansi and Jenny, but she did not expand much on this experience. As per the third criterion, Mark, an occupational therapist in Ontario, was the counterpart to Maria. As per the fourth criterion, Mark was also redeployed several times and he was more descriptive as to what that was like. See Table 1 for a summary of selected cases.

Table 1

A summary of selected cases for this project

	Province	
Allied health profession	Ontario	Manitoba
Respiratory therapist	Jenny	Ainsi
Occupational therapist	Mark	Maria

4.3 Data Collection Methods

In the case study methodology, the use of multiple different data collection methods is encouraged to garner a detailed reconstruction of the case(s) of interest (Ridder, 2017; Tellis, 1997). The literature recommends collecting such data over a period (Hartley, 2004). In this project, two methods of data collection were used, diary entry and interview. This strategy allowed to collect longitudinal data that covered wave 1 and wave 2 of the pandemic. The diary entry data was collected between April and October 2020, which paralleled with period of wave 1. Interviews were conducted in December 2020, which was the start of wave 2.

4.3.1 *Diary method*

With the diary entry data collection method, the entries of participants served as the primary source of data. This method is unique because it limits researcher influence (Bartlett & Milligan, 2015). The diary method was also the most appropriate to apply in this study because of the social distancing parameters put in place by the phenomenon of interest, the COVID-19 pandemic. Due to these restrictions, we no longer had the liberty to meet with participants and were discouraged from conducting face-to-face research. Furthermore, because public health measures were instated abruptly and recommendations were changing constantly, this method of data collection granted us the opportunity get a description of what was happening in the field in real-time. This allowed us to capture longitudinal data where participants remained immersed in their respective environments (Bartlett & Milligan, 2015).

Out of the various types of diaries, the semi-structured audio diary format was selected because it granted the participants with liberties to share what they wanted, while still allowing us to guide them with specific questions (prompts) (Bartlett & Milligan, 2015; Hyers, 2018). See Appendix C for diary prompts. The prompts were created by the research team of the larger project. Using the prompts, participants were asked to make two entries per week, after a workday, and for a total of 12 weeks using a voice recording app on their personal phones. During periods where participants were on vacation, they were asked to pause recording and resume after they returned to work. After REB approval was awarded, participants were requested to e-mail their recordings to a research team e-mail address. Diary data was collected between April 2020 and October 2020 and corresponded to their experiences during wave 1 of the pandemic. Participants recruited in May 2020 and June 2020 were asked to reflect upon what had happened in the previous

months. More specifically, participants used the first and/or second recordings to recall their experience at the very start of the pandemic, March and April 2020. Another master's student and I transcribed the diary entries, verbatim, as a part of the research team of the larger study.

The diary method comes with both strengths and limitations. This method is advantageous because participants have time to collect their thoughts, be reflexive about their practice, and are not pressured to answer questions right away (Bartlett & Milligan, 2015). Furthermore, because the principal investigators only contacted the participants in the beginning of the process and did not engage in any coercive behaviour, the researcher-participant power dynamic was balanced. The principal investigators only connected with participants via e-mail during the recruitment process or if requested by a participant. Participants chose if they wanted to receive periodic reminders to record their entries. Participants were in control of when and where they wanted to record. This strategy also overcomes the long-standing limitation of recall bias present in other qualitative research data collection methods (Alaszewski, 2006; Bartlett & Milligan, 2015; Enosh & Ben-Ari, 2016). Participants were recording their experience in real-time as the event was happening. The main limitation associated with using the diary method was that I had to rely on the participants' interest and willingness to share and expand on their experiences. As a means of controlling this limitation, the best practice for diary method is to listen to the entries as they are being submitted and follow up with questions for the participants to be mindful of for their future entries (Hyers, 2018). However, because full HREB approval was awarded 6 to 7 weeks after the initiation of the larger study, we were unable to listen to the diary as they were recorded, and therefore follow up questions were only sent at the end of the 12-week recording period. An initial analysis of the diary entries helped to identify gaps and inform the follow-up interview guide (used to conduct interviews in December 2020 as the second data collection method).

4.3.2 *Interview method*

In this project, we used a semi-structured interview format to collect information about the second wave of the pandemic. Like semi-structured diary entries, semi-structured interviews use predetermined questions, but allow the researcher to deviate and inquire about other emerging concepts (Gray, 2004). Interviews are typically conducted face-to-face (Bolderston, 2012). However, due to the social distancing parameters to reduce the spread of COVID-19 and the geographic spread of participants between two provinces, the interviews were conducted using a virtual platform, Zoom.

The interview questions were developed collaboratively with the principal investigators, collaborator, research assistants/master's students, and the project coordinator. The focus of the interview guide was to address any gaps in the collected diary entry data and to learn about the participant's experience from their last diary entry to the date of their interview. See Appendix D for interview questions. The interview guide was piloted twice (once with a master's student who was a physiotherapist and once with a PhD student who was an occupational therapist). Then, diary participants were recruited to participate. The interviews took place between December 2020 - January 2021. I interviewed 7 participants for the larger study, 3 of whom were included in this project: Jenny, Mark, and Maria. Ainsie, the remaining case of this project's sample, was interviewed by another master's student a part of the larger research team. Interviews were transcribed by a professional transcriptionist, and then cleaned for accuracy by the principal investigators of the larger research project. As mentioned previously, 13 participants out of the original 16 accepted the researchers' invitation to be interviewed.

One advantage of semi-structured interviews is flexibility (Gill et al., 2008). This is especially true if a participant does not answer the question at hand or misunderstands it, it offers the interviewer a chance to rephrase the question. Furthermore, semi-structured interviews allow the researcher to deviate from the pre-prepared questions if need be and explore topics brought about by participants (Gray, 2004). As for the limitations, though not time consuming for participants, interviews can result in a lot of data that can be time-consuming to transcribe and challenging to organize during analysis (Adams, 2010, p. 366). This limitation was overcome by the research team hiring a professional transcriptionist. To make the large volume of data more manageable, NVivo, a computer software system was used. Additionally, there is the risk of researcher bias influencing the participant through leading questions or non-verbal cues (Doody & Noonan, 2013). Researcher sophistication is required to create an open and safe space for the participant to share their experiences (Adams, 2010, p. 366). As a novice researcher, I was coached on how to conduct effective interviews and conducted practice sessions with seasoned researchers prior to the interview data collection phase.

4.4 Provincial Context Data Collection

In the results section, a brief overview about the order of events in each province, Ontario and Manitoba, is provided before the presentation of the cases of the respective provinces. The focus of these overviews is to provide a timeline of events and additional context information to better understand the participant's experience. The overview includes dates during wave 1 and 2 of when certain public health measures were implemented, when pandemic-related policies were

introduced and period of closures and reopening. The data for these context briefs was collected from grey literature, more particularly online news articles.

4.5 Process of Data Analysis

This project used a combined inductive and deductive approach for analysis. I started out by using an inductive approach, reflexive thematic analysis. After completing the first two steps of the reflexive thematic analysis, I read about the Roy Adaptation Model, and decided to apply it within a framework analysis approach. This topic of research had limited existing literature and thus, limited guidance on how to approach data organization and analysis. Also, the data collection methods used in this project resulted in a large volume of collected data. I liked how applying the Roy Adaptation Model allowed for the categorization of data into four overarching modes. It made the data more comprehensible to understand, analyze and present.

In deciding to apply the Roy Adaptation Model, the original inductive approach to data analysis changed to a deductive approach. Since reflexive and framework analysis are both subsets of thematic analysis, they share the end goal of developing themes (Goldsmith, 2021). The two approaches also start out in the same way with familiarization of data and generating initial coding (Smith & Firth, 2011). In what follows, I will explain in detail the steps I took in analyzing the collected data.

4.5.1 Familiarization

Data analysis began with data familiarization, where I immersed myself within the data (Braun et al, 2019). This was done by listening to the audio of diary entries and interviews, transcribing the data, and reviewing the transcriptions. I re-read the transcriptions in full, twice, and made notes on key points about each entry.

4.5.2 Generating codes

This step involved beginning to organize all the data (diary and interview) more systematically by attaching labels/codes to the data (Braun et al, 2019). Braun and Clarke (2006) advise using the maximal number of codes as a first attempt at organizing the data. I initially coded the transcripts of all the data on the Apple application, Preview. This part of the analysis was inductive as it was rooted from within the data, a “bottom-up” approach of grouping large amounts of data into codes of 1-4 words. Groups of text were assigned a relevant code that summarized the main premise of the text (Braun et al, 2019).

4.5.3 Developing thematic framework

This next step involved working through the data and assigning initial codes. Traditionally, in an inductive approach, the researcher identifies codes for each case that would make up the thematic framework (Gale et al., 2013; Goldsmith, 2021). However, I used a combined inductive and deductive approach to develop the coding framework. The inductive coding process, as described above, happened first where topics of importance were identified within the collected

data in a “bottom-up” manner. At this point, the Roy Adaptation Model was introduced into my approach to data analysis. So, next was the integration of this deductive framework. The inductive codes helped to identify components within the 4 adaptive modes of this model that were most relevant to the objectives of this thesis. Additionally, the inductive codes helped to confirm the applicability of the model to this study. The inductively developed codes for all cases were collectively divided into 4 adaptive modes (physiological, role function, group identity and interdependence) of the model using the mode definitions. See Appendix E for the final coding framework.

4.5.4 Indexing

This step involved applying the developed thematic framework and coding the diary entry and interview data for each of the four participants (Goldsmith, 2021). In this project, I used NVivo to code the data with the framework.

4.5.5 Interpretation

The last step is interpreting the data, making within and across case or theme comparisons (Goldsmith, 2021). The following two chapters, *Results* and *Discussion*, are dedicated to presenting just this interpretation.

4.6 Generalization of Study Findings

As aforementioned, the aim of an intrinsic case study is not to project the study findings onto other related groups (Hancock & Alogozzine, p.34). The topic of generalization in qualitative case study is still addressed, just in a different lens (Hartley, 2004, p. 331). The case methodology allows for analytical generalization (Hartley, 2004, p. 331). The findings of a case study are specific to the sample group because the context and processes that are analyzed that shape their circumstances are specific to them. By presenting these elements of a case in detail, transferable assumptions can be made of what can be expected by another group if they identify similarities between their conditions and those of sample group (Hartley, 2004, p. 331). In the results section, each case is thoroughly presented, and additional important contextual information is provided. This concept of analytical generalization bears resemblance to the term ‘naturalistic generalizations’, coined by Stake (1995). Naturalistic generalizations are where the experiences of participants are illustrated in such a descriptive manner that others can perceive having experienced the phenomenon themselves (Melrose, 2010; Stake, 1995). In the case study methodology, the generalizations are not about the group but about the context of the cases (Hartley, 2004, p. 331). The findings of this project could inform a study interested in the experiences of another group of healthcare professionals working in primary care settings in other Canadian provinces during the beginning of the pandemic. One of the ways to increase generalizability of findings is by including more than one case in the study, as was done in this project (Hartley, 2004, p. 331).

4.6.1 *Trustworthiness*

Historically, validity and reliability are concepts of positivism. In qualitative research, trustworthiness is the standard for quality research. Lincoln and Guba (1985) presented a list of tenets to achieve trustworthiness in qualitative research: credibility, transferability, dependability and confirmability. These concepts bare resemblance to the traditional validity and reliability measures. Credibility is the confidence in the findings being true. This can be achieved by prolonged engagement with data and data triangulation (Lincoln & Guba, 1985). In this study, more than a year, over several stages of the project, was spent getting to know the data and becoming familiar with the context of COVID-19 in primary care setting. Additionally, data triangulation was achieved as this study used more than one method to source data over a prolonged period of time (Krostjens & Moser, 2018). Transferability, similar to external validity, has to do with the ability to transfer findings to other contexts. This can be achieved by thick description (Lincoln & Guba, 1985). This entails going beyond describing the participants' their behaviour and experiences and describing the context in which they are situated (Krostjens & Moser, 2018). For example, the interdependence mode provided insight into the environmental setting of the participant's experience. Additionally, a brief summary of the order of events in both provinces of interest is provided before the presentation of cases. Dependability is the reproducibility of the study and confirmability is the findings being grounded in the collected data. These last tenets of trustworthiness can be achieved by an audit trail (Lincoln & Guba, 1985). In application to this study, the relevant components of the audit trail include (Carcary, 2020; Halpern, 1983):

(1) Raw data: Diary entry and interview data were stored on NVivo.

(2) Process details: This chapter outlined how the study was operationalized. Components of the methodology including sample selection and data collection methods were explained coupled with justifications. A comprehensive overview of the method of analysis was provided.

(3) Data reduction and reflexive notes: Once coded, a summary of the relevant pieces with data reflexive comments was made. See Table 2.

Table 2

Reflexive notes from Jenny's data from the interdependence mode

Data summary	Reflexive notes
At the start of the pandemic, when Jenny was first redeployed, clinic management failed to support the clinic staff adequately: “That was a challenge because we don't have very robust programs in place to protect us against sickness. We have some sick time, not a lot. We don't have WSIB coverage, we don't have short-term disability coverage. Generally, it's kind of banked on us being low risk and there were some questions brought up about covering us for risk that were met with challenge. Eventually, they were resolved but not without some consequence to myself professionally” (Diary - May 11).	I was really shocked to learn that Jenny's clinic management was not providing health workers with the appropriate coverage and insurances at this time. I assumed that authorities would make protecting health providers a top priority. These providers play such an important role in pandemic response and work in high-risk settings. I was happy to hear that Jenny stood up to management and fought for protection. But I think it's unfair that she had to advocate for that. If I was in Jenny's shoes, I would feel scared of having to work during a pandemic and I would feel hurt that management was not doing everything to protect me. I would feel expendable.

(4) Data reconstruction and synthesis: The next chapter, *Results*, presents the findings for each case. The following chapter, *Discussion*, focuses on interpreting the findings, relating

the findings back to the literature review, comparing between cases, and exploring the implications of the findings.

4.7 Conclusion

This chapter of the thesis detailed how data were gathered and analyzed. The chapter described how two methods were used to collect data. The diary entry method helped gain longitudinal insight into how public health measures during wave 1 affected the allied health professionals on a week-to-week basis. Secondly, the interview method was used to gain a more summarized perspective from participants and more geared toward capturing the experiences from wave 2. The chapter presented how thematic/framework analysis was applied to create a coding framework. It also explained the different way this project achieved trustworthiness. In the next chapter, the results will be presented. A total of four cases will be discussed in the results section, two primary care allied health professionals (occupational therapist and respiratory therapist) working in Ontario and two of the same professions working in Manitoba.

Chapter 5: Results

This chapter of the thesis presents the results from applying the framework to the collected data. The results are presented per case. This chapter is organized into two sections: Manitoba and Ontario. As mentioned previously in the literature review, public health measures were implemented in the different regions at different times. Therefore, a summary explaining the public health measures implemented and timing is provided for each province at the start of their respective section. The remainder of the section will describe, using the framework, how these measures affected the experience of healthcare professionals. Manitoba is presented first, with the cases of Ainsy and Maria, and next, Ontario is presented with the cases of Jenny and Mark. The presentation of each case begins with a short introductory paragraph about the allied healthcare professional and is followed by each of the adaptive modes.

5.1 Manitoba

The first case of COVID-19 was announced on March 12, 2020 (Rosen, 2020a). Six days later, on March 20, 2020, the province declared a state of emergency (Lefebvre, 2020). From that point forward, public health measures were slowly implemented, starting with restricted capacity to enforce social distancing, and then escalating to the reductions in different sectors. The same week (end of March) that emergency orders were instated, and COVID-19 testing centers started to open, however eligibility was restricted: a referral from Health Links was required for testing (McGuckin, 2020). A complete shutdown of non-essential businesses was mandated on April 1, 2020 (Rosen, 2020b). It was not until April 16, 2020 that testing became available to essential workers, and then later opened to the general public who were showing symptoms (Unger, 2020a).

Restrictions began lifting in early May 2020, starting with the opening of non-essential medical services and other non-essential businesses like outdoor recreation programs, outdoor dining, and libraries (Bernhardt, 2020). Further restrictions were lifted in early June 1, 2020 (Rosen, 2020c). On July 25, 2020, the province was in Phase 4 re-opening and other leisure and entertainment businesses like movie theatres re-opened (Gibson, 2020a).

In Mid-August 2020, the province announced the ‘RestartMB’, a colour-coded response plan, where certain restrictions were associated with a certain level of risk (MacLean, 2020a). At that time, the province was in the Caution Level, the yellow zone (Level 2 on a scale of level 4 with the green zone being the least restricted and red zone being the most restricted) (MacLean, 2020a). Case numbers continued to climb gradually. The first region to move to the Restricted Level, the orange zone, happened at the end of August 2020 (Gowriluk, 2020). Also, on August 24, 2020, the Manitoba Government initially introduced mask mandates at health centres (Gibson, 2020b). The mask mandates extended to other service areas at the end of October 2020 when Winnipeg, the most populous region in Manitoba, moved to into orange zone. (Gibson, 2020c). On November 9, 2020, the province saw a large increase in COVID-19 cases (Unger,2020b). On November 12, the whole province moved to red zone, the highest risk level, and restrictions were re-implemented (Rosen, 2020d). Throughout the month of November 2020, additional restrictions were implemented (MacLean, 2020b). On December 8, 2020, all present health orders were extended (Gibson, 2020d). Later in the month, on December 24, 2020, the Manitoba Government announced an agreement allowing redeployment of staff to priority areas (Unger, 2020c). The public health measures presented here acted as the stimuli (input) into the Roy Adaptation Model, that influenced adaptation of the allied health professionals. The next section shares how this stimulus affected Ainsie and Maria’s adaptation in each of the four modes.

5.1.1 Ainsi

Ainsi was a respiratory therapist working in Manitoba during the time of the pandemic. Diary entry data from this professional was gathered from April 2020 until July 2020. Ainsi used his first few entries to reflect on his experience at the very start of the pandemic, during March 2020. Then, an interview was conducted on December 11, 2020. Ainsi started his position in the primary care setting two years prior to the pandemic. Following Roy Adaptation Model's adaptive modes, the following discusses how public health measures impacted the experience of this allied healthcare professional, starting with role function mode.

5.1.1.1 Role function mode

5.1.1.1.1 At the start of the pandemic

When the state of emergency was declared, Ainsi was directed to stop seeing patients at the clinic. Ainsi explained: "People were running around making changes and then my boss decided that we need to cancel all our appointments because we weren't taking patients in the clinic. We ended up having to go to the front door and work it. What we had to do was to screen patients and make them put on a mask and wear gloves if they were positive for symptoms. And we had to cancel all our appointments. Then, we started doing phone appointments" (Diary 1 reflecting on March 2020). Therefore, Ainsi was directed to change how he was conducting his primary role, where he was no longer able to see patients in person and transitioned to a virtual format. As a result, this healthcare professional was no longer able to do spirometry, which encompassed a large part of his primary role.

5.1.1.1.2 Redeployment during wave 1

As case numbers continued to increase, public health policies were implemented to control transmission. These policies led to this professional taking on new additional responsibilities like redeployment. In fact, it even impacted his workplace. Initially, it was the clinic that was transformed into a testing site. Ainsî explained: “We had been told by the region that one of the clinics that we cover was now going to be a testing clinic and as a result, we were taking turns screening patients who were coming in for appointments and for testing for the COVID viruses” (Diary - March 23). The week after, towards the end of March, when the province started opening COVID-19 testing sites, Ainsî reported: “We got an indication that we were going to start doing the testing at a drive thru facility which was the Manitoba Public Insurance garage where they assess cars for damages after an accident. And, of course, it was a big kerfuffle because things weren't fully arranged, we were half getting ready to go there and half still testing at the site. When it started, we were all reassigned to certain days testing” (Diary - March 30).

The testing eligibility was initially very restrictive, and as a result Ainsî had to turn people away from testing, which was an instrumental behaviour that this professional had to rapidly develop: “Some people were showing with symptoms, some people weren't, and we had to tell them we're not testing you at this point and some people were upset, some people were glad. And it's a new development of skills where we had to talk to people to calm them down about not needing the test. One of our lines we were using was: ‘Well you can get tested, but if it's positive, there's no treatment. So, we would tell you what we're going to tell you right now, which is to go home and isolate’” (Diary - March 30). However, by the end of April, as testing requirements were less restricted, the need to apply this instrumental behaviour lessened: “There are not as many

interesting stories because most people were qualifying and as a result there was less debates. The few that we did have to turn away, left with no problem, with little discussion” (Diary - April 20). In late April, just before Manitoba started re-opening efforts, Ainsi’s services were no longer required at the testing site: “We are being told now our shifts are being canceled because we have been replaced by someone else, not sure who it is, but we've been replaced. So, my shift at this site with testing, the MPI garage site, was cancelled” (Diary - April 27).

With non-essential medical facilities opening, Ainsi was redirected to work at his clinic as a front door screener: “It seems like we are now being volunteered to work at the site, one of the sites, to screen employees when they come into work and provide the home care workers with supplies. This is our new duty as we have now been told our services are no longer required for the testing site. So we had to get a bit of training, which was nothing too difficult, about checking off the person's name and their resource coordinator, and then we had to provide them with any supplies they wanted. Usually it's PPE, masks, goggles, gowns, and hand sanitizer” (Diary - May 4). By June 8, right after the province lifted even more restrictions, Ainsi was no longer required to volunteer as a front door screener: “We don't have to do any screening anymore, so that's been pretty good” (Diary - June 8). Redeployment became less of a focus in Ainsi’s diary entries during June 2020 and July 2020, and he started sharing how he had returned to some of his pre-pandemic duties but in an adapted manner.

5.1.1.1.3 Adapted role

Due to the respiratory mode of transmission of COVID-19 and physical distancing measures, one of Ainsi’s primary role activities was put on hold, i.e., spirometry. One of Ainsi’s

goals during the summer was to try to get this diagnostic test started again: “I created a spirometry document for us to follow for when we start spirometry again. Shared it amongst my colleagues, they gave feedback, we all put something together. And then suddenly, we hear that the region and the province wants to make the call. It's kind of interesting when we had to stop, no one told us we had to stop but now we want to start again, and everyone wants in on that decision. Anyway, want to do it safe, so just waiting for that decision to happen” (Diary - June 1).

Meanwhile, his primary role transitioned to doing more smoking cessation and remote care: “During COVID, my primary thing has been smoking cessation, and doing some respiratory assessments over the phone, just talking with patients, making recommendations to their physicians, and sending it back” (Interview - December 11). Ains explained that he was being more proficient during the pandemic in following-up with his patients: “With the Quit Card program, it's expected that we follow-up at four weeks and at six months. Pre-pandemic, I couldn't follow-up with them before the four weeks, which was problematic, because sometimes at four weeks, they hadn't used the Quit Card because of a technical problem. Now, I'm able to do the follow-up with them within a week or two, and if there is any issue, we can address it and get them using it by the one-month follow-up” (Interview - December 11). This healthcare professional chose to connect with patients via phone over other virtual strategies because it was the better for his patient clientele. Ains explained: “I think a lot of, especially older patients, don't have a cell phone, or if they do have a cell phone, they're not familiar enough with it to use it. I've been able to get a hold of the younger [patients] ones, easily through the cell phone. I just haven't had the request [to use virtual technology], and because things have been working well, I haven't seen the drive to do it” (Interview - December 11).

However, with restrictions continuing to lift during the summer months, Ainsi was facing a new challenge with his adapted role of a remote care provider because patients were getting harder to get in touch with: “One thing I’m finding is that people are still quite receptive but getting a little bit harder to get a hold of. I was getting almost 100% when I phone people but now that percentage is dropping. And I think this may be due to people feeling more free to go out and get stuff done” (Diary - May 18). Just as Ainsi was starting to get comfortable with his adapted role, in December 2020, the government of Manitoba issued a mandated redeployment for allied healthcare professionals.

5.1.1.1.4 Wave 2

Ainsi shared his experience with the second wave of redeployment: “I got told I was going to get redeployed, but I don’t know where. Later I actually found out where. I’m going to be redeployed to [hospital] for a couple weeks, but there was about a week and half of uncertainty because we didn’t know, what was happening. They told us we were getting redeployed later in the week, then next week, and then at the end of the week. Nothing was happening, but they were telling us to cancel our appointments... I feel it’s breaking, the momentum, especially with patients who have quit or are about to quit [smoking]. They were quite disappointed that we won’t be able to do regular follow-ups ... I re-returned all of my spirometry requests and any patients who I’ve been following ... So all of those people I’ve just put on pause and just will pick them up once I’m back” (Interview - December 11). Therefore, the mandatory redeployment forced Ainsi to deter from his primary care role.

5.1.1.2 Group identity mode

Initially, with the first redeployment in wave 1, the delegation of roles was aligned with the group identity of allied health professions. Ainsî described the role assignment at one of the sites he was redeployed at, the COVID assessment centre: “There were essentially four roles. There was the screener, there was the person who took history, there was the runners and the swabbers. We also had the people entering health history, so I guess that’s five roles. And all of us together, were taking care of getting patients tested. As the screener role, we had to ask people if they had symptoms and again, give them gloves and mask and to wash their hands and line up. And I guess what was interesting was, there was a general sense that only nurses could do the history part and allied health would do the heart of screening. And then we had med students doing the running, as well as the nurses doing the running and the runner had to talk to the patient and confirm their data. Once they confirmed the data, they go in to see the doctor and they would leave them there for about 15 more [minutes for] deeper screening and swab if they still qualify” (Diary - March 23). At the start of the pandemic time, Ainsî saw redeployment as an opportunity to promote the respiratory therapy profession: “Still feeling very useful and glad to help out as this is a chance for me and the profession, an RT, to be involved as part of a community of people who are working and helping out in a virus and making a contribution” (Diary - April 27).

As the pandemic progressed and redeployment continued, there was a disconnect between role assignment and role identity. Ainsî shared how he was doing roles not specific to his group identity: “Then what happened was, some of the other allied health ended up having to do the history taking because they were short nurses and so everyone was doing all different jobs” (Diary - March 23). This disconnect continued further till this healthcare professional’s education and

skills no longer mattered: “I think I mentioned in the diaries that they started off with ‘only physicians can do it’ and then, all of a sudden ‘maybe nurses and nurse practitioners can do it’ and then it was like ‘well, RTs can do it’ and then ‘anyone with a pulse’” (Interview - December 11). Ainsy further elaborated: “From the health arm of it, whenever when we’re getting redeployed, especially to the testing site, sometimes we end up doing jobs that someone who doesn’t have our level of education can do. With the high unemployment rate, we just thought maybe you should hire some of these other people rather than having us do this so that we can continue to take care of our patients” (Interview - December 11).

In addition to the disconnect in group identity created by the deviation in redeployment roles, public health measures also affected Ainsy’s professional identity within the team. The social distancing and reduced in-person clinic capacity limited Ainsy’s ability to promote his role: “What we did was, every once in a while, we would go to one of the service offices at lunch time and just sit in the lunchroom just like the drug reps do and say ‘Hi, I’m (Ainsy). I’m a respiratory therapist. I do spirometry and smoking cessation. Send me some referrals’ but we haven’t done that in months” (Interview - December 11). Ainsy experienced challenges with being able to exercise his professional identity, and during this time, he relied on his team and clinic manager for support.

5.1.1.3 Interdependence mode

5.1.1.3.1 Primary care team

At the start of the pandemic, Ainsy and other team members had to incorporate the added task of screening in-coming patients into their daily workday schedules. Ainsy described his team

worked together to adapt to this rapid change: “The team I work with is very good ... we kind of work together, we try to self-schedule working at the front and everyone got equal time to work at the front and see patients by phone” (Diary - March 16). Ainsi hinted at having a positive interpersonal relationship with his team: “... we have a WhatsApp chat group that we talk to each other all the time anyway,” and “So, socially, as much as possible, we do lunchtime walks, so we’ve been trying to keep that up” (Interview - December 11).

When public health measures were introduced and staff were redeployed to different sites or working from home, Ainsi’s team dynamic changed. For example, there was a decrease in the frequency of in-person meetings: “It’s slower, because in the past, you would run into someone in the hall and you’d say ‘hey, I sent you some information about Mr. So-and-so,’ ‘oh yeah, I got it.’ But now, because we’re not running into each other in the halls, we’re kind of just waiting for electronic responses, which are sometimes not timely” (Interview - December 11).

While public health measures negatively affected Ainsi’s interpersonal relationships in the clinic, redeployment awarded an opportunity to build other interpersonal relations. Ainsi explained that one advantage was working closely with people he did not normally work with: “Another great thing that happened was I got a chance to work very closely with a few of the providers, the nurse practitioners, as well as the doctors who I have been sending referrals to. But because of the busyness of the clinic, we never really got to sit and talk or work with each other, side by side. And this was a great opportunity, something I thought was a benefit of the crisis” (Diary - March 30).

Later, when redeployment became infrequent and he was working more in clinic, Ainsi was able to re-connect with his team: “And it's actually good cause now we are back to doing our

lunch time walks. We used to do but because of us not being together, we haven't been doing them consistently, but now we're able to" (Diary - April 27).

5.1.1.3.2 Primary care clinic management

Ainsi shared that he was supported by both his team and his manager while working during the pandemic: "I was feeling part of the team, our Allied Health group, we're always supportive of each other and I think it made it easier. I had our supportive boss as well as supportive team, and the new people we met were also very supportive, very cooperative, and we had a really good team working together. Made for a good experience" (Diary - April 20). Even with the public health measures to reduce in-person clinic capacity, Ainsi's manager let Ainsi decide where he wanted to work: "I mostly worked at the office except for a few days when I had medical appointments. At home the place I had for working was not very comfortable for using a laptop" (Diary - July 18). Unfortunately, Ainsi did not receive the same level of support from provincial authorities as he did from his manager.

5.1.1.3.3 Provincial authorities

The actions of provincial authorities in Manitoba treated Ainsi as if he was expendable: "With some of the redeployments, there was always an expectation to just drop what we're doing and go. And with the amount of requests for us to do different things, there was always this feeling that whatever we had to do can wait" (Interview - December 11). Ainsi shared how he had to comply to such requests without much contest: "I think the thought process that it's a pandemic

and it's a just do it kind of thing, 'we're in a pandemic, it's an emergency, just do what I'm asking you to do'" (Interview - December 11). There was no consulting or flexibility as there was with Ainsie's clinic manager. The public health measures imposed by these bodies lead to changes in his role, identity, and interpersonal relationships but also affected him emotionally and physically.

5.1.1.4 Physiological mode

5.1.1.4.1 Senses

At the beginning of the diary entries, shortly after the first case of COVID-19 was confirmed in mid-March, the declared state of emergency caused service disruption and system reconfiguration. Ainsie described how he felt: "I felt a bit down with trying to get things- it's more because of the unknown than anything else. I didn't know, anxiety, I guess, what was happening, what was happening with the patients, what did it mean for us to have the COVID in Manitoba" (Diary 1 reflecting on March 2020).

Some of these same emotions reappeared when the province started re-opening the economy in May. Ainsie felt worried and hesitant: "Week of May 4th and the COVID pandemic is continuing and some of the regulations or restrictions have been lifted and they're opening up some businesses such as hairdressers and some stores, retail, and also some restaurant patios. Some of the healthcare professionals are feeling that it's too soon, some are wondering about the choices of some of the businesses they have chosen to open. And, myself, I'm thinking, I'm a little concerned about the hairdressers being open but some of the other places seem okay" (Diary - May 4).

In June, additional restrictions were lifted. Ainsî was feeling less apprehensive and wanting to restart part of his primary role that he'd been restricted in doing for the past few months: "I would like to get back to doing spirometries, I feel like there's something missing and I'm sure that spirometry is part of that cause. That was my segue into doing all these other things and connecting with other providers. So right now, feeling that it would be nice to get back to doing spirometries" (Diary - June 1). However, this was disrupted due to a rise in case numbers in fall 2020.

With the onset of wave 2, in December, Ainsî's emotions were more directed towards his role and work schedule. Ainsî felt frustrated with the level of uncertainty surrounding potential upcoming redeployment: "I'm going to be re-deployed to [hospital] for a couple weeks. There was about a week and half of uncertainty, because we didn't know what was happening. They told us we were getting redeployed later in the week, the next week, and then at the end of the week ... It was a bit of an uncertain period. It was a little frustrating" (Interview - December 11).

5.1.1.4.2 Protection

During these redeployments, protection was one area that Ainsî did not have to worry much about. Ainsî was redeployed to work at a COVID-19 assessment centre which put his health at an increased risk of exposure. Ainsî used PPE to protect himself: "So there's masks, goggles and gown, that's what we were wearing" (Diary - April 20).

5.1.1.4.3 Activity and rest

Redeployment affected Ainsi professionally, as it led to disruptions in his role, but it also affected him physically: “So I had to be there at 5:30 [am]. I usually wake up at 5:30 [am] so this was a bit challenging. I didn’t sleep very well. As my co-workers also said, that they didn’t very well the night before they had to be there for 5:30” (Diary - May 4). With being redeployed, Ainsi had to make some changes to his personal routines, that affected his physical well-being.

5.1.2 Maria

Maria was an occupational therapist working in Manitoba during the time of the pandemic. Diary entry data was gathered from this professional from the end of May till July 2020 and an interview was conducted on December 4, 2020. There were some technological issues with the initial week of the recording, therefore some information from the first few recordings was missing. Maria started her position in a primary care clinic in November 2019. This was her first position in the primary care setting. Maria was not afforded the full time to integrate her role and acclimate to the new setting before the onset of the pandemic in March 2020. As the presentation of Ainsi’s case, the following will explain how the stimulus, public health measures, impacted the experience of this allied healthcare professional starting again with role function mode.

5.1.2.1 Role function mode

5.1.2.1.1 At the start of the pandemic

Maria did not share what had happened when the public health measures were first initiated. In fact, when she started to record the diary, she explained briefly that her work week was scattered, where she was redeployed two days at the testing site, then working two days at the clinic and one day at home. As explained with Ainsi, Maria was also directed to change how she was conducting her primary care role and transition to a virtual format. Therefore, she too lost a large part of her primary role, home visits: “So visits used to be home visits and clinic based, now they are over the phone, predominantly, and virtual if clients are open to it. Typically preference is phone, surprisingly enough, but we’re taking it with stride” (Diary - May 13). This extended beyond patient visits to also include other patient services like group programs. Another major role disruptor was being redeployed, which took time away from doing her primary role.

5.1.2.1.2 Redeployment during wave 1

In wave 1, Maria was redeployed part-time to swab people for COVID testing. But when the province started lifting restrictions, Maria was no longer redeployed to do this: “We are no longer, as occupational therapists, allied health, physios, respiratory therapists, you name it on our team, required to work at the swabbing clinic, here, in our community. So, that is great news” (Diary - May 15). Unlike Ainsi, who saw redeployment as an opportunity to advance his profession, Maria saw redeployment as a mandatory task that was ultimately a waste of her skills: “It became repetitive, meaningless, essentially, aside from knowing you’re helping, and just that

dreadful day...” (Interview - December 4). Similar to Ainsie, she was also redeployed to do staff screening. When non-essential medical facilities were re-opening, Maria was redeployed to do staff screening instead: “We have now been redeployed to staff screening, so staff screening for symptoms” (Diary - May 15). As non-essential medical facilities reopened, Maria diary entries focused more on her adapted role.

5.1.2.1.3 Adapted role

Due to public health measures, Maria’s role, like Ainsie, transitioned to a virtual format. With the adoption of virtual group sessions, Maria explained how she had to develop the instrumental behaviour of helping patients access the sessions: “There's a lot more teaching and coaching and walking through that is required before attending a group which has meant unanticipated burden and time capacity that I need on my caseload to get through, so that is also different” (Diary - May 13). In addition to continuing with the group programming that Maria was running pre-pandemic, she started a new group, a COVID-19 support group: “So starting up COVID-19 support group, which I never thought I would have to do, one, virtually, and two, never thought I would have to run my other groups virtually...” (Diary - May 13). The adoption of this new group was in direct result of the different ways COVID-19 and public health measures were affecting her patients. Maria was an occupational therapist that specialized in pain. But she adapted her role to accommodate a change in patient needs: “I would say mental health has increased referrals. There will be pain diagnoses, but now, instead of pain and struggling with some anxiety, it’s struggling to leave the house or go to work due to fear and anxiety with COVID and pain secondary. There’s pain, right? So, it’s flipped a bit” (Interview - December 4).

However, the frequent changes in public health measures consequently led to changes in her role and affected Maria's ability to adjust to her adopted role. Maria was directed by Winnipeg Regional Health Authority to stop running virtual groups: "So, we had some unfortunate news, we ran our, to be told, last COVID-19 support group today. We just started running the sessions last week and got on a roll with more attendees and success and people were very appreciative and express lots of gratitude but higher directions, they said no more virtual groups" (Diary - May 20). Then a few days later, this decision was overturned, Maria shared: "I'm very happy that our group did not get closed, did not get suddenly stopped and so far the attendance rate is great and the group is being well received and people are very grateful for the opportunity at this time" (Diary - May 26). Maria commented on her instrumental behaviour of having to manage these rapid role impacting changes:

"...what does that mean for my caseload, so now I'm expected to tell everyone, knowing that they're canceled for right now, that all those 16 who registered, I have to get a hold of to cancel before the next week so that they don't anticipate tuning in, as well as, my support group clients who have enrolled and then if it starts back up again, it's reinventing the wheel of reconnecting and making sure people have new links to sign on" (Diary - May 20).

She further elaborated: "So, it really does create a bit of, at least, not double the work but close to essentially stopping, halting and then moving again..." (Diary - May 20).

At the beginning of June, when case numbers were at an all-time low, Maria reported being no longer redeployed: "So now that we are not any longer redeployed, we do have our caseload time back..." (Diary - June 5). Maria was able to get back to her primary role but in an adapted way, remotely. Like Ainsie, Maria was able to connect with her patients more frequently: "So the

touching base with clients might be a little more frequent as they might come back to me sooner and go you know that strategy, we discussed that actually didn't work..." (Diary - June 8). But she shared how doing her job virtually created more work. More specifically, she had to re-invent her pre-pandemic assessment protocol to abide by public health measures: "...making sure things are mailed out before phone appointments just so people can have it in front of them and look at them ... there seems to be a little bit more legwork and thinking ahead of time for virtual and phone versus when you see people in person..." (Diary - July 6).

Towards the end of June 2020, when more public health measures were lifted, Maria returned to her primary role of conducting home visits: "It was my first complex detailed home visit since COVID-19. So, a whole three months later since I've had one..." (Diary - June 22). Into July 2020, Maria shared the new normal of her workday: "Today was another home visit and actually today [I'm] in clinic. I would have to say was probably the first day in the office feeling near normal as I have, since the third week of March when things just hit, it felt like, and occurred overnight" (Diary - July 7). However, this progression toward returning to her previously halted primary duties regressed due to the onset of wave 2.

5.1.2.1.4 Wave 2

December 2020 was the peak of wave 2 in Manitoba. Maria described the change from the summer months into the winter months as previously lifted restrictions were re-instated: "Well, end of July too, I think a few entries prior to that, I had started to say home visits were easing in, a little bit of normalcy was starting to be felt. So, of course, that's drastically changed as we've been then- it feels a little bit step back towards March again. No in-person is absolutely required,

and just due to the nature of my specific type of caseload, I don't get the same traditional type of priority one falls, risk prevention, or wheelchair emergencies that other caseloads may see. So, I'm very much virtual and telephone only" (Interview - December 4).

The onset of the second wave disrupted Maria in getting back to the flow of things: "When we started to get creative in the summer and implemented groups for the fall, it became survival again quickly after into the fall session. So, creativity was kind of stifled again" (Interview - December 4). Her ability to do her role was due to be further disrupted with potential full-time redeployment: "So, we all may be potentially redeployed full-time. We don't know. We got told last Monday, haven't heard a thing since. There may be a chance for some help with mask fit testing, which is very part-time and only for a short period but, again, prolongs that full-time redeployment" (Interview - December 4). Like Ainsie's experience, Maria had to exercise her instrumental behaviour once again to manage rapid schedule changes: "But then again, the mystery of the region. We could next week be told, you're only needed for a couple days a week or you're not needed at all, we overstaffed and asked for a response beyond our need. So, we're doing all this preparation, but I can't help but also be very frustrated in the sense of I know how disorganized this can look. It'll be great if I could stay with my caseload, but also unfortunate for the time I've put towards this and the clients I need to call back and say 'Just kidding! I'm here!'" (Interview - December 4). These such redeployments also affected Maria's professional identity.

5.1.2.2 Group Identity

In the peak wave 1, Maria's was redeployed at the COVID-19 testing centre part-time. She was surprised to be redeployed because she felt her profession could make a greater contribution

toward pandemic response in the community: “So, when there was first phase discussion of redeployment, I thought, ‘nah, nah, our profession, no way am I getting redeployed. I may not be able to do home visits, but look, people are struggling’” (Interview - December 4). The redeployment roles were not complimentary to Maria’s role as an occupational therapist, thus not consistent with her role identity. She provided insight into how redeployment roles were allocated: “They look at, ‘oh, these allied health have transferred some personal hygiene experience and can do bed care and wheelchair? Okay, great.’ That’s not the core of OT. Those are very task-specific skills that they’re looking to fill in nursing homes, right? So, I think those are important, for sure, but I don’t think they’re considering OT. They’re looking at what’s included in this training, and it could be health care, RT, PT, OT, nursing, you name it, essentially” (Interview - December 4). Some healthcare professionals feared losing their jobs due to the pandemic, but Maria was more concerned about not being able to practice as an occupational therapist: “Yeah, so just fear of not doing OT” (Interview - December 4).

In June, when Maria was able to return to her OT role full-time, she described re-connecting with her identity as an occupational therapist: “... going on a home visit, which again it feels like normal as it happened prior, in pre-COVID, with a very occupational therapy lens focus was - rather than coping for the pandemic - was refreshing and just felt comfortable and, to say the least, normal” (Diary - July 7). More so, Maria felt the pressure to show the worth of her profession as to avoid future redeployment and be able to continue doing the occupational therapy focused work that she so strongly identified with: “... pressure, a lot of pressure, in hopes that the occupational therapy role is seen and valued into the potential second wave of this pandemic experience” (Diary - June 5).

However, in December, in the height of wave 2, Maria was selected to potentially be redeployed again. This full-time redeployment meant the potential of having to do tasks outside of the scope of an occupational therapist, which was work that Maria found really important for the community: “Knowing that you’re still helping in phase one of a response was still rewarding to some extent to keep going, but that second time just was frustrating because you’ve had this many months since the first redeployment and you’re still redeploying allied health for programming that have a purpose in the community? Like, why? What happened? Why isn’t there a backup plan?” (Interview - December 4). Maria hinted to the lack of understanding about her role and thus her identity from the provincial authorities with regards to being redeployed again: “So, more frustration and anger – sadness too – and that thought of ‘do they not see the purpose and the value behind the service?’” (Interview - December 4).

Similar to how Ainsie was limited in his ability to promote his role in the clinic, Maria shared about some of the lack of understanding about her role in her clinic: “I would say, going over, again, maybe as a community but especially as a team – the smaller team and larger teams together – as what our roles look like. It’s COVID. It hasn’t changed, but, actually, this is what has worked. This is what I still offer. Like I said, understanding prior to COVID wasn’t there anyway, so it’s required and needed as soon as possible” (Interview - December 4). She described how the public health measures affected the dynamic with her team.

5.1.2.3 Interdependence mode

5.1.2.3.1 Primary care team

Maria reflected on her team's efforts to adapt to the pandemic and the accompanying public health measures: "My smaller team, I would say, in adapting to COVID, we've tried to be as creative as we can be, but, again, there's those systematic barriers of approval, inconsistencies between teams over the region – like, area of city. So, we've done our best, but I think it could've always been better, but I don't think that's all within our control" (Interview - December 4). Due to public health measures resulting in staff redeployment and working from home, Maria's primary care team was not always in-person, in the clinic, at the same time. So, communication shifted to virtual platforms: "But that being said, I mean, sometimes there's negatives and positives, so the connection piece doesn't feel as strong because you're not face-to-face, but now everything goes into one place. As a group, we'll message or keep in touch virtually because we're all off-site, at home, at clinic, but all different days because of distancing and clinic footprint" (Interview - December 4). She elaborated on the change in the team dynamic: "I would just say the warmth, the personal connection, the human connection, it's a little bit less" (Interview - December 4).

In addition to at the clinic, Maria also experienced a decline in team atmosphere at the redeployment site as the pandemic progressed: "We were one of the sites of the first actual swab clinics before they moved to drive-thrus. So, it actually felt like a team approach, like a family getting together to, overnight, make this happen and support each other. So, that felt, actually, really good, rewarding. Then as the sites popped up, it was less personable. It was more mix matched. You were more of a number to support this versus a person at a site and part of a team, right? So, then it just became task-based versus meaningful, I guess" (Interview - December 4).

In December, with the potential of full-time redeployment looming, Maria commented that the disconnect within her team might grow: "...but if we're redeployed full-time, there would be no reason for me to be checking my primary care email anyway, nor will I be granted a chance, really. I don't know if I'll have the tech or the sign-in. I have no idea. Out of sight, right? So, that'll be a huge disconnect" (Interview - December 4). Despite the distance created between Maria and her team members, Maria and her clinic manager had a supportive relationship.

5.1.2.3.2 Primary care clinic management

With the frequent and uncertain changes to her schedule that redeployment brought about, Maria relied on their clinic manager for support: "In our small team, yes, I would say our team manager is great" (Interview - December 4). Maria's clinic manager tried to make redeployment equitable: "She looks for input, so she'll say, 'I'm thinking last time you were deployed two times a week, and two months later you were told that you're not needed.' So, she said 'To avoid that disruption again, I'm thinking of offering one day a week and making sure that all the other teams are equally contributing so that that makes sense,' whereas the first phase, some teams slid under the radar" (Interview - December 4). But this support as per redeployment was only provided by her clinic management and not present at the provincial level.

5.1.2.3.3 Provincial authorities

Maria shared the provincial authorities' approach on redeployment: "We've never been part of the decision or the communication prior. It's very much 'this is what's happening, and

you're likely going to be doing X, Y, Z'" (Interview - December 4). The decisions of the provincial authorities triggered negative emotional responses from Maria.

5.1.2.4 Physiological Mode

5.1.2.4.1 Senses

Redeployment took time away from Maria and limited her ability to work with patients in an OT capacity. She expressed a sense of grief when being redeployed. In mid-May, when the Winnipeg Regional Health Authority had advised Maria to stop conducting virtual groups in the case of potential future redeployment, she felt disappointment and anger due to the possibility of not being permitted to do her primary role: "Definitely threw off my whole day, entirely, my mood, my momentum, my passion..." (Diary - May 20). When the Winnipeg Regional Health Authority decided to not cancel virtual groups, Maria shared: "I'm very happy that our group did not get closed, did not get suddenly stopped..." (Diary - May 26). She expressed more positive emotions when she was no longer redeployed and returned to her OT role: "So, yeah, freedom, some celebration, more back to normalcy as much as you can..." (Interview - December 4).

Toward the end of July, the province entered Phase 4 re-opening, Maria shared how she felt: "It is an odd feeling with the phases increasing in our province rolling out into phase four to be completely honest" (Diary - July 20). Toward the fall months, when COVID case numbers were rising again, Maria reflected on the risk of a healthcare provider working during the pandemic: "Working with a partner who also works in health care, that fear of possibly needing to help out again on a COVID unit, the fear of having to isolate and reduce contact with the family overall

again, completely due to being higher risk for transmission to our family members and wanting to keep them safe. It does feel a bit of like a threat, right” (Diary - July 20). During the length of the pandemic, the health of allied health workers was at increased risk. Maria explained how she was protected.

5.1.2.4.2 Protection

Working at the COVID-19 testing centre put Maria at increased risk to contract COVID. When she was no longer redeployed at the centre, Maria shared: “So, it's a relief of it not to be in direct contact with possible positive COVID-19 cases at a swab site...” (Diary - May 15). Though having to work in a high-risk setting was far from ideal, Maria shared that she was adequately protected: “The standards of hygiene care, PPE notices, we get them right away. So, nothing feels lagged to the point where you were at risk. So, that’s very helpful and reassuring. I don’t feel unsafe at all in our sites – so that’s a huge bonus – in general, from the disease” (Interview - December 4).

5.1.2.4.3 Activity and rest

Like Ainsie, she commented there being a decrease in wellbeing: “...lack of self-care, lack of sleep, overall, increased stressors in life, overall, less work life balance” (Diary - May 19). Maria reflected on how working during the pandemic affected her physically: “I must say, I didn't anticipate feeling as a therapist, professionally and as, on a personal level, such exhaustion and fatigue. I wouldn't say it is burnout, per se, but I am quite amazed at still the amount of moving

targets, changes, adapting, modifying, that is still required” (Diary - June 5). Maria worked at three different sites during wave 1: redeployment site, primary care clinic, and at home. She adapted her role to abide by distancing public health measures and identified remote care as one source of exhaustion: “And that since new processes require new steps and new learning, that is likely also contributing to the increased fatigue and exhaustion I find at the end of a week such as today” (Diary - June 5). Maria used the term ‘survival’ to describe her workdays: “Again, it’s that surviving, and that’s personally and professionally” (Interview - December 4).

This concludes the presentation of results from the primary care allied healthcare professionals from Manitoba. Next is the presentation of results from the providers working in Ontario. The Ontario section is structured the same as the Manitoba section. It will begin by providing a chronological order of the implementation of COVID-19 public health measures. Then, it will present the two cases of Ontario primary care allied health professionals. The discussion chapter will further analyze the results and compare the two provinces.

5.2 Ontario

The first case of COVID-19 in this province was confirmed on January 25, 2020 (DeClerq, 2020a). The Government of Ontario declared a state of emergency on March 17, 2020 (Rodrigues, 2020). Several orders ensued, closing non-essential businesses and a gradual reduction of indoor capacity and gatherings. On March 24, 2020, the province was in a full lockdown (DeClerq, 2020b). The long-term care facilities in Ontario were heavily impacted by COVID-19. On March 28, 2020, the province issued an emergency order allowing staff redeployment and role re-

assignment as needed (Bowden, 2020). Resources and staff were located to long-term care homes to support these facilities (Bowden, 2020).

Access to testing for COVID was limited between January 2020 - April 2020. Only people meeting the restrictive conditions set forth by Public Health Ontario qualified. Such conditions included recent travel, contact with a confirmed case, and being a healthcare worker (Crawley, 2020). In the following months, the Government of Ontario expanded access to testing. They widened eligibility criteria for testing and increased the number of testing sites (Herhalt, 2020). The redeployment of healthcare professionals to work at COVID-19 testing centers varied. Redeployment was not mandatory in Ontario. The need for workplace at testing centers increased with the onset of a new wave.

On April 25, 2020, the province announced that certain healthcare professionals would receive pandemic pay (DeClerq, 2020c). Respiratory therapists were not initially included. But in the month of May 2020, this was amended and respiratory therapists working in hospital, community, or home settings were eligible (Government of Ontario, 2020). In mid-May, primary care clinics were allowed to re-start in-person appointments if they followed the public health measures that were in place. On May 20, 2020, the Government of Ontario announced a three-step plan to re-open businesses, *A Framework for Reopening our Province* (Goodfield, 2020). In June, the province switched to a regional approach in re-opening the economy where regions would progress through the three-step plan individually depending on their respective volume of active cases (Patton, 2020). By mid-July, most regions in Ontario progressed to stage 3 of re-opening (Samba, 2020). Re-opening efforts continued through to August 2020 (Moon et al., 2020).

In September 2020, case numbers in Ontario surged. Some of the previously relaxed restrictions returned; permissible gathering sizes and in-outdoor capacity reduced. Regions in the province stalled in their plans to re-open. On October 2, 2020, the Government of Ontario introduced mandatory masks mandates province-wide (Rocca, 2020). Prior to this, masks mandates in Ontario were up to regional discretion. Some cities, like Ottawa, implemented masks mandates as early as July 2020 (Pringle, 2020). In mid-October, regions in the province regressed to a modified Stage 2 (Artuso, 2020). On November 13, the province changed the framework for reopening the province to a new five-tier framework, *Response Framework*. The five stages and associated colours were Prevent (green), Protect (yellow), Restrict (orange), Control (red), and Lockdown (grey). This framework had a regional approach. The different regions progressed through the different stages as per their specific needs (Davidson, 2020a). Throughout November and December 2020, the more populous areas in the province like cities in Greater Toronto Area teetered between the Control (red) and Lockdown (grey) stages (“Ontario places more”, 2020; DeClerq, 2020d). In mid-December, Ontario began its first vaccine rollout (Jeffords, 2020). On December 26, 2020, the Government of Ontario initiated a province-wide lockdown that carried through into the new year (Davidson, 2020b). In January 2021, the province declared another state of emergency (Rocca, 2021).

5.2.1 Jenny

Jenny was a respiratory therapist working in Ontario at the time of the pandemic. Diary entry data were gathered from this participant from the end of April till August 2020 and an interview was conducted on December 14, 2020. Jenny had been a respiratory therapist for the

past 20 years. Over the years, she worked in several different care settings. At her primary care clinic, Jenny was the respiratory therapist team lead and the smoking cessation team lead. Out of all the other study participants, Jenny was the only one who mentioned having previous experience of working during a pandemic. During the 2009 H1N1 pandemic, Jenny was working as a respiratory therapist in an acute care setting. Same as with the presentation of cases of the Manitoba allied health professionals, the following explains how public health measures impacted the experience of Jenny as per the adaptive modes, starting with role function mode.

5.2.1.1 Role function mode

5.2.1.1.1 At the start of the pandemic

The week in March that the government of Ontario announced the state of emergency was the same week that Jenny’s practice stopped seeing patients in-person and transitioned to a virtual format. She shared how this change was very sudden and not well executed: “The week of March break, which was March 16, was when my organization went from seeing patients in-person to doing everything virtually and it literally happened overnight. It was a very rapid decision and was not handled well” (Diary - May 11).

As a result of this change, Jenny’s work setting and role were affected. Jenny’s work setting was divided between her primary care clinic and working from home: “At work, we are only allowed to come in office one day a week. In office days are very much treasured because you have full access. There are no limitations whatsoever in your in-office days so we tend to be very

busy in our in-office days and we do the best we can when we are working from home” (Diary - May 11).

With only being able to connect with patients remotely from home, Jenny lost part of her primary role of doing spirometry: “So, went from rapidly seeing people in person to seeing people virtually, which I had done generally, where I had already completed virtual visits, do things by telephone but to do it solely that way, that was a challenge. We had to inform everyone that we would be stopping that procedure [spirometry], luckily that wasn’t met with any type of backlash at all, everyone understood. So that was halted pretty quickly” (Diary - May 11). Another major role change was redeployment. Jenny shared: “Then our role started to change, and we were being asked to work at the assessment centre doing nasal-pharyngeal swabs for COVID-19” (Diary - May 11). Jenny was voluntarily redeployed throughout the length of this study.

5.2.1.1.2 Redeployment during wave 1

During wave 1 in Ontario, long-term care homes were hit very hard with COVID. The Government of Ontario introduced a mandate to redeploy healthcare workers as needed. Allied health professionals like Jenny were redeployed to service these facilities. Jenny shared: “We have started swabbing, long-term cares, retirement homes and congregate care settings here from the community-based family health team that we work from. It’s one of those redeployment places, between the SWAT teams. Our long-term care homes are not faring well, one in particular ... Staff in the hospital were redeployed there, some of our staff are working there as well. We went in to swab everybody” (Diary - May 11).

Jenny was a part of a team called SWAT teams (Jenny did not know what the acronym SWAT stood for), where she was responsible for swabbing residents. She explained her tasks: “So I had my first trip for that this week and doing swabbing. The swabbing role is actually performing the swabs and the scribing role is basically filling out paperwork, labels, that kind of thing. So going into care settings I’m not normally going into. People have been very receptive. Some of the residents not so much, brings me back to my acute care days of not knowing what people are going to do at any point in time” (Diary - May 28). Even though redeployment was not required, Jenny continued with being redeployed out of choice, in addition to working her adapted role at her primary care clinic.

Throughout wave 1, Jenny was redeployed part-time to a total of three different sites at different times. In June 2020, she was redeployed to work at the congregate care living centres as part of SWAT teams to swab residents. In July 2020, she was redeployed at the COVID assessment centre as a screener and swabber. The role of a screener was to collect patient history and do a preliminary screening of symptoms, whereas the role of the swabber was to conduct the nasopharynx swabs. In August 2020, Jenny shared how she might be working at an influenza-like-illness clinic, organized by her primary care clinic, in the following months: “However, come the fall, my job may change, we may be working in what's going to be called a respiratory or an influenza like illness clinic. But what that's going to look like right now, I might be stepping out of my role and going into that” (Diary - August 5). With the onset of wave 2, Jenny was in fact redeployed to work at this clinic. All these redeployments affected Jenny’s primary care role. As a result, her role adapted to accommodate the changes.

5.2.1.1.3 Adapted role

During the month of May, when primary care clinics started resuming in-person care and the province of Ontario started to re-open, Jenny continued to connect with patients remotely: “Still conducting all my patient visits virtually, mostly by telephone, but I do some communication through an app from Think Research called Virtual Care, which is an app people can download on their cell phone. Some people like it, some people don't, most people just like picking up the phone” (Diary - May 28). She further explained: “So doing everything entirely by telephone. It's flipped. I used to do like 75% in person and 25% by telephone, now it's 95% by telephone and 5% in person” (Diary - July 20).

Due to the shift in patient needs, Jenny had to develop the instrumental behaviour of supporting patients in ways she did not before: “A lot of supportive listening, which is not my role, traditionally, being a respiratory therapist, not that I don't do this predominantly but usually when people are having mental health concerns, we refer them to a mental health therapist. We can't do that, they're really burdened, and we have basically just become mental health therapists in our own right” (Diary - May 22).

Jenny continued to do her primary role in adapted ways. Before the pandemic, she was running programs in person. After, during the pandemic, she was running the same programs, just virtually: “Now we're starting to get back into this new normal and now I, program lead a few programs, so now it's trying to figure out how to revamp these programs to possibly deliver them virtually, if they've been stagnant or to see where everything is” (Diary - May 22). Jenny shared an example: “Smoking cessation services are back up and running but it's 100% virtual and that's going very very well” (Diary - August 5). Before the pandemic, Jenny ran a patient monitoring

program to monitor the vitals of chronic care patients. Then, during the pandemic, she adapted the program to service patients with COVID-19 and monitor their vitals.

As the province progressed through the different stages of re-opening in the summer months, Jenny started resuming more of her primary role. Toward the end of June 2020, Jenny did her first home visit since the start of the pandemic: “I actually get to do a home visit for the first time since March and it's definitely a lot different than before. I have been periodically seeing patients face-to-face in a non-official way, socially distancing, leaving things for them, dropping things off then picking things up. But this is my first official home visit that I had to obtain permission and kind of substantiate why I needed to see this person. That's a lot different for me” (Diary - June 24).

Despite Jenny regaining the ability to do a majority of her primary role, spirometry was one part that never resumed. During the summer months, Jenny worked towards resuming this test: “I work in a working group ... to figure out best practice guidelines for spirometry and that should be interesting when that reopens. In the meantime, we're doing everything virtually and whatever means works” (Diary - June 10).

5.2.1.1.4 Wave 2

Jenny was interviewed in December and wave 2 had not been yet declared in Ontario. Case numbers were high again in comparison to the late summer months and early fall and this meant increased restrictions. Jenny shared about her adapted role at this time: “Me and the other respiratory therapists are doing telephone consultations and virtual consultations, but nothing in

person outside of home visits, as I mentioned before, but even those have stopped since we've gone to red zone" (Interview - December 14). As Jenny had predicted toward the end of her diary entries, she was redeployed to work at the influenza-like-illness clinic: "There's less redeployment outside the organization now, so I'm not working at the assessment centre or the call centre anymore, or with the swab teams doing swabs. That part is done now. The cold and flu shot clinic are run within my own organization" (Interview - December 14).

She shared about her roles at the influenza-like-illness clinic: "I do a variety of roles there. I could triage patients, which is just basically history and a set of vital signs. They call it a circulating nurse, because I'm the only respiratory therapist who works there. Basically, it's assisting the physicians, who are assessing the patients, running standard tests such as rapid streps, urine HCGs, or whatever the physician needed. We started doing those, and then paired that with flu shot clinics. We paired up with Public Health, and so I've been administering flu shots. The redeployment changed. I do that a couple of days a week and then I do my primary care role" (Interview - December 14). Jenny never shied away from redeployment and this was reflected strongly in her sense of identity as a respiratory therapist.

5.2.1.2 Group identity mode

Jenny was redeployed at different sites doing different tasks since the start of the pandemic. She expressed that redeployment was an opportunity for her to exercise her clinical skills: "For me, it's been really good. I always like a challenge and I like learning new skills, but not everyone is like that. I always consider myself a clinician at heart, and part of me kind of misses hospital work, so if I can pick up a needle or a stethoscope or a pulse oximeter and do something like that,

then I kind of tend to jump onboard. So, that's been different and enjoyable in that sense” (Interview - December 14).

During the pandemic, Jenny was limited in her capacity to engage with patients and do spirometry: “I miss the patient connection that you can get when you're face-to-face. Obviously patient assessments really important. Subjective reporting of symptoms, for example, is great but sometimes you know a lot about people's condition by looking at them and obviously being able to physically assess them. I have equipment that they don't meaning blood pressure cuffs, I can auscultate their chest, listen to their chest, I can check their oxygen levels, heart rate, blood pressure...” (Diary - July 30). Redeployment was a way for Jenny to remain connected to the clinical aspect of her job that she identified strongly with.

Secondly, Jenny saw redeployment as a way to promote the role of a respiratory therapist and advance the profession. Jenny was eager to share the potential of respiratory therapists with the other professionals: “At the beginning, they were like ‘Oh, I don't know? Can you swab?’ and I was like ‘Really? RTs can, for sure, swab.’ It's not something we normally do in primary care, but I've nasally inserted airways and that kind of thing” (Interview - December 14). Jenny further explained: “The one benefit is when you have a role like mine and then you do something that's not traditional to the role, and immunizations are a perfect example, they're like ‘RTs can give immunizations?’ and I'm like ‘Yeah, we can, we just don't normally.’ So, when they see you taking on new things and being proficient at it, I think it increases confidence” (Interview - December 14).

Jenny was proud of her skillset as a respiratory therapist and the contribution her profession could make toward pandemic response. Redeployment served a way for Jenny to stay connected

to her respiratory therapy identity. Redeployment also served as a way for Jenny to build interprofessional relations with other healthcare professionals as some of her previous relationships were no longer the same.

5.2.1.3 Interdependence mode

5.2.1.3.1 Primary care team

The public health measures created distance between Jenny and her team, both physical and interpersonal. Jenny explained that she was no longer casually running into her colleagues anymore, because not everyone was working in the same physical environment: “Everyone is a lot more of an independent practitioner now than they ever were before...” (Interview - December 14).

Jenny missed socializing with her team: “So normally if I'm in the office, I get a lot of chit chatting and social time with co-workers but not a lot of time to connect on a professional level, now it's opposite, we don't really connect very much socially but we connect regards to work quite a bit more” (Diary - July 30). Jenny further elaborated on the divide within her team: “So even though I do see people, we're still not having lunch together, not doing the things that we normally do...” (Diary - June 24). Formal communication between the team also changed as it transitioned to virtual formats: “It can go up and down, sometimes communication is great if everyone happens to be online at the same time and available at the same time. But it sometimes is challenge if they're not getting a hold of people, sometimes it's tough” (Diary - August 5).

While relations within her team at the primary care clinic dwindled, redeployment sites granted Jenny with an opportunity to work with people she normally did not and build new connections: “So, they have some time to ask me a specific question and that’s resulted in a better therapeutic relationship and personal relationship between me and some of the physicians, and some of the nurses I don’t normally work with either or the admin staff. In some ways, it’s been teambuilding...It is kind of a teambuilding type thing, because people are coming out of their traditional roles and out of their silos and are having to work with new people, and so you’re getting exposed to new people” (Interview - December 14). Conversely, relations back at Jenny’s primary care clinic were strained, especially with her clinic management.

5.2.1.3.2 Primary care clinic management

Jenny’s relationship with clinic management was initially rocky. But as the pandemic progressed, Jenny was supported better, and the relationship also changed for the better. At the start of the pandemic, when Jenny was first redeployed, clinic management failed to support the clinic staff adequately: “That was a challenge because we don’t have very robust programs in place to protect us against sickness. We have some sick time, not a lot. We don’t have WSIB coverage, we don’t have short-term disability coverage. Generally, it’s kind of banked on us being low risk and there were some questions brought up about covering us for risk that were met with challenge. Eventually, they were resolved but not without some consequence to myself professionally” (Diary - May 11).

When Jenny transitioned to working from home, clinic management found ways to support her: “Our organization has been great to come up with different ways that we can access the

electronic medical records for phone use and things like that. They've been wonderful that way" (Diary - May 11). The support continued into the summer months of the pandemic. When Jenny was working towards resuming spirometry, she reflected on her clinic management's support: "For spirometry, I thought that I'd have to really fight to get the equipment. We're getting the most support, and it's costing them lots of money to do it... I've gotten everything I've asked for, so I can't really complain. The lack of support I felt in the early days has eased as time has gone on. I think we just had more time to converse about it and the anxiety of the initial 'Oh my God, what are we dealing with?' has settled down, because now it's more of a known entity, whereas in the early days, it was an unknown entity" (Interview - December 14). Jenny shared how the provincial authorities also supported her as she worked during the pandemic.

5.2.1.3.3 Provincial authorities

Jenny shared that the provincial authorities supported her with providing updates and information on the virus: "I received the emergency operations update emails. I don't know if you know what I'm speaking about, but I find those very helpful, because it keeps you up to date on information, especially in the early days surrounding personal protective equipment and a command centre in the early days where we were able to access PPE. Those types of calls are helpful" (Interview - December 14).

Elected officials, like the Minister of Health was accessible which Jenny also found helpful: "She [Minister of Health] made herself decently accessible, as well, to answering questions and that type of thing. Even within the context of respiratory therapists in Ontario, she's helped us out with a few different things that we were struggling with, so that was good"

(Interview - December 14). She further elaborated: “She [Minister of Health] went out of her way to not only acknowledge the hard work that we were doing but was like ‘What’s going on?’ and then did something about it, which was really, really nice. And then we were included in the pandemic pay, and that was appreciated, and so that was a good thing too, and that was also as a result of that call because, originally, we weren’t acknowledged as part of the pandemic pay”

(Interview - December 14). Jenny’s experience of working during the pandemic was riddled with highs and lows and this was also reflected in her emotional response.

5.2.1.4 Physiological mode

5.2.1.4.1 Senses

At the start of the pandemic, Jenny recalled feeling worried: “I’m wondering what was going to happen, me trying to reassure them [patients] without knowing myself what was going to happen ... the worry about wondering what was going to happen, when it was going to happen, reassuring patients, reassuring my family trying to be calm, cool and collected when I myself was wondering what the heck was going to happen” (Diary - April 28). As Jenny had previously worked in the H1N1 pandemic, she reflected on her prior experience and what working during the COVID-19 pandemic would mean for her: “As a mother and a wife, and with children and like many other people trying to keep my family safe when I work in an unsafe practice. It’s very much to the forefront of my mind and a concern but I have been through this before so, I’m going to go through it again” (Diary - April 28). Jenny further elaborated that the worry and fear was mainly due to the lack of knowledge on the virus: “In the beginning days of COVID, we didn’t know what it was, and we were like ‘Oh my God, am I going to get this and die?’ There was a lot of fear there

due to lack of knowledge, and we didn't know much about it, and I think everyone was kind of scared on a personal level" (Interview - December 14).

The start of the pandemic also involved the introduction of public health measures that reduced Jenny's capability of doing her primary role and as a result, she felt helpless for not being able to help her patients: "Makes me feel helpless, again. Although I am trying my best, I do recognize I'm trying my best and there's always barriers to the system but this is just one other added barrier" (Diary - July 27). When the province started re-opening efforts, primary care services also started to resume but in a very controlled manner. Jenny found this control over her work to be frustrating: "That whole new process is not only very cumbersome, it's a little bit frustrating having to justify why I need to see someone in person but here we are" (Diary - June 24).

5.2.1.4.2 Protection

Jenny was redeployed to many different sites, doing tasks with varying amounts of risk. Jenny shared using the following to protect herself: "Full PPE, face shield, mask, gown, scrubs, whole deal, gloves..." (Diary - July 16). Access to PPE at redeployment sites was not a problem, but access to PPE for resuming part of her primary role, spirometry, was challenging. Provincial authorities did not classify spirometry as an aerosol generating medical procedure (AGMP): "So establishing whether it's an AGMP or not ... results in a different layer of personal protective equipment, more considerations on settle time when people cough or breathe out, cleaning will vary as well but the settle time's the big time. Do we need to rip up carpets in our office? Our offices even adequate to do this now? Do we need air exchange? Do we need windows to open?"

Do we need HEPA filters? Do we have the PPE in place? What PPE do we use? Can we even get PPE?” (Diary - May 28).

As a result of this non-AGMP classification, her primary care clinic was not eligible to receive PPE from the government to support the resumption of this diagnostic test: “We're not on a list, currently, at the government level to receive N95 masks so we'd have to either procure some from the hospital or get ourselves on that list. And the availability of these masks is limited so we would probably be asked to re-use them in some capacity and I just don't know how that would work” (Diary - June 18). Jenny further commented on the lack of PPE: “I've said it once, I'll say it 1000 times ... if we're swimming in a sea of N95 masks and 95 respirators, we would not be having this conversation, we would just use them, they would supply them and that would be it. But we are not swimming in a sea of M95 masks, they're hard to get and they're expensive” (Diary - August 10). Stressing over the access to PPE was one of the many things that made working during the pandemic a physically taxing experience.

5.2.1.4.3 Activity and rest

Jenny shared that the first few weeks of the pandemic were very hard to work: “The first six weeks, so from mid-March to the end of April, were very very very hard. I didn't- I shouldn't say I didn't realize, I forgot how physically taxing being mentally taxed is. Not unheard of to finish my day, come home, sleep on the couch. Not unheard of to sleep fourteen hours a night” (Diary - May 11). A few weeks later, she shared once again, how adapting her role and being redeployed affected her: “So I felt really burned out, mentally exhausted, physically exhausted, anxious, short tempered. All the things I don't want to be and all the things that I need to fix. So, I had about 10

days off, I feel very recharged, ready to go” (Diary - July 6). This was how Jenny regained her strength. She would take a few days off to re-coup. As the pandemic progressed and Jenny was working towards being more vigilant about her health: “Trying to take care of myself, get an adequate amount of sleep, get some exercise, eat properly is difficult, but I’m managing” (Diary - May 22).

5.2.2 Mark

Mark was an occupational therapist working in Ontario during the time of the pandemic. Diary entry was gathered from May till August 2020 and an interview was conducted on December 21, 2020. Mark has been an occupational therapist for the past 20 years and worked half of his career in the primary care setting. Mark’s full-time status was divided across three different positions. He worked 0.5 in family practice, 0.2 in a foot care clinic, and 0.2 in mental health. His primary care clinic was located within an ambulatory hospital. Same as with the presentation all the other cases, the following will explain how public health measures impacted the experience of Mark as per the RAM’s adaptive modes, starting with role function mode.

5.2.2.1 Role function mode

5.2.2.1.1 At the start of the pandemic

As mentioned previously, the province of Ontario instated several public health measures, one of which called for the temporary closure of all non-essential businesses. This public health

measure applied to the health care sector. Therefore, some healthcare professionals were deemed non-essential and no longer permitted to see patients in person: “For us therapists who see clients who are not urgent, we’re considered to be non-essential” (Diary - May 22). As a result, like Jenny, Mark also lost a large portion of his primary role. Just as Jenny was no longer able to do in-person lung function testing, Mark was no longer able to conduct in-person assistive device program assessments: “A lot of seniors who would need walkers because now its spring, they want to be out and about, and I can’t service them. One man I called, he had a fall about two days ago. And he said that, ‘I need to get a walker,’ But I can’t help him” (Diary - May 22).

He was also no longer able to provide group programing, which was a big part of his primary role: “Unfortunately, I am not able to help out that population at the present time, because I am not able to run groups in person” (Diary - May 22).

Finally, the loss of in person contact put Mark at risk of losing a portion of his primary role permanently because the foot care clinic he worked at was not generating any revenues. Mark explained: “We haven’t been able to generate any revenue for the last eight, ten weeks” (Diary - May 27). He elaborated: “I think from what I hear, my understanding from my boss is that we’re on the radar to think of cutting or reducing hours” (Diary - May 27). Losing or getting cut from this primary role would have had an impact on his employment status, since this would mean his position would become part-time. To compensate for these reductions in primary role, Mark took on new duties through redeployment.

5.2.2.1.2 Redeployment during wave 1

Like Jenny, Mark was redeployed to three different sites during the length of wave 1. Mark described his first of many redeployments: “I was redeployed to help the surgical day unit with patients post-op” (Diary - May 29). With this new role, even though this was an OT specific role function, Mark still had to develop the instrumental behaviour of working with a different population with different needs in a different clinical setting which sent him back to his books: “So, learning curve, reading of the processes on how to chart electronically because in family practice we have a different system of charting on the EMR, here it is called PSS. And in the day surgical unit it’s EPIC which is a different EMR system. So, learning to navigate that, plus, the team, the staff, and then the patients” (Diary - May 29).

In June 2020, Mark got redeployed doing screening for a family practice clinic: “I was redeployed and I was doing screening in family practice. There’s more patients coming in to be screened... And then tomorrow I’m going to be redeployed to surgery” (Diary - June 9). Despite Jenny and Mark having different professions and different scopes of practice, both worked in the role of screening. As a screener, Mark had to develop the instrumental behaviour of policing and making sure people were following the public health measures and the strict protocols that were in place: “Just making sure that the protocol is in place and a little bit of fight back or resistance from the patients. And you’re just there to implement the protocol and not really be policing it. But I sometimes feel that you have to police” (Diary - June 16). Toward the end of June 2020, early July 2020, when the province was re-opening more, Mark shared more about how he was able to adapt his primary role as an OT.

5.2.2.1.3 Adapted role

To keep servicing his patients, Mark transitioned his practice to a virtual format. Mark explained he was connecting with his patients over phone and a virtual platform: “I’m doing more video visits on a platform called OTN. And also doing phone visits as well, and I like them both” (Diary - August 11). Mark shared how he had to adapt his protocols to better fit doing his role remotely: “I was going do to the Montreal Cognitive Assessment over the video, but the problem is there is a pen and paper section in the assessment on the screen that I need to do with her, in front of her. ... If I were to send her that portion, then she can draw it, and she can take a picture, and she can email that back to me? I’m just trying to think of ways that we can do that over video” (Diary - July 25). Mark also returned to running group programming but in an adapted capacity, virtually: “We are trying to do a group through zoom. It’s a medical zoom that’s on the EMR that we have here at the hospital which is called EPIC in mental health. So, we’re already trying to organize some dates for the fall to run virtually, just maybe 15 people, not more than that” (Diary - July 25).

In addition to working his adapted role, Mark continued to be redeployed part-time as a screener for his family practice and as a PPE trainer at the testing site, but that was a choice: “And the beauty of being redeployed is that you have the option to say no or yes to certain shifts. It’s not like mandated that you have to. It’s nice to have the option, it’s nice to be flexible, it’s nice to bring your own work on to a redeployment shift. Its finding that niche that works for you. And I really like the autonomy of that, and the independence that we can choose” (Diary - August 11). Continuing redeployment out of a choice into the summer months was another similarity between

Mark and Jenny. Redeployment once again became a more central part of Mark's day with the onset of wave 2 and the re-implementation of public health measures.

5.2.2.1.4 Wave 2

At the time of Mark's interview, in December 2020, parts of Ontario were in the red/lockdown stage, as case numbers were high and strict public health measures were in place. Mark was due to be redeployed soon: "We don't where everyone is going to be, but we're going to be helping out this in-patient bed unit that's going to be for our hospitals. They are not COVID patients, but we're going to be helping out to off-load the system of trauma of the other hospitals here" (Interview - December 21).

In the meantime, Mark was still practising his adapted role: "So, I'm having the in-person clinic once a month just to see patients for splinting and for mobility aids. Other than that, everything is either over the phone or on video" (Interview - December 21). But some of his primary role that he had returned to doing was again halted due to wave 2: "I don't have to work groups. If I had to work groups plus do what I do, plus redeployment, it would be really tough but it's helpful that I've got the time to be able to help out and to be redeployed" (Interview - December 21). Redeployment impacted Mark beyond his occupational therapist role and affected his sense of identity.

5.2.2.2 Group identity mode

Mark was redeployed at three different sites; these experiences affected his identity as an occupational therapist. He expressed that his identity as an allied health professional was not taken very seriously: “Being dismissed, being not valued, or acknowledged” (Diary - June 29). He described this situation that happened when he was screening at the family health practice. A patient was undermining his identity as a healthcare professional: “Just like this patient, coming in, barging in, and not really taking me seriously. So that’s the other thing that is really a trigger for me. That I’m a clinician; it’s almost as if she sees me as something like, I don’t know, something ‘less than’. But it’s very insulting. And not cooperating, not listening to the rules, or following protocol, is something that really triggers me” (Diary - June 29).

Mark explained that allied health professions took the brunt of redeployment compared to other professionals who were perceived as ‘more valued’ in the health care system hierarchy: “But it’s not funny at the same time, because these things do happen. And I’m risking myself, and other people like myself, on the front line, when we really don’t make a lot of money. But then, we’re triaging all this for the physicians. Who make much more than us and at a greater lower risk, because they’re doing 80% of their care now virtually, 20% face-to-face” (Diary - June 29). Mark felt his identity and the work he was doing during the pandemic was not as respected: “Yeah, as a profession we are really under undervalued” (Interview - December 21). This was in stark contrast to Jenny who saw working during the pandemic as an opportunity to advance her respiratory therapist profession. She readily advocated to be involved in different pandemic response efforts.

Mark shared how his profession was such a big part of the pandemic response but yet not as appreciated: “We are the health care system actually, and to me, to be recognized and to be paid

for what we have work, I think is really important” (Interview - December 21). He had to learn new duties, he had to adapt his role and work around not being able to do his primary care role but felt his efforts were not valued: “Care to physicians is a huge jump from allied health to physicians is not like the next step up, it’s a huge gap. Sometimes I understand that they have more education, I understand that they have more responsibilities but some of the healthcare practices they can delegate to us. But yet since we are supporting patients, a lot of the patients they can’t really deal with because they are dealing with keeping people alive. Sure, that is important, but I would say that I think that we are really underappreciated, undervalued, and not compensated enough” (Interview - December 21). Mark’s overall sense of togetherness with his team also experienced change.

5.2.2.3 Interdependence mode

5.2.2.3.1 Primary care team

In wave 1, due to public health measures, there was an increased separation between Mark and his team members. Mark explained that people were working from different places: some were working at home while others were working in clinic. The team was more independent and working alone more: “It’s very mechanical. I would say. We’ve lost that team building, team rapport and that connect with each other” (Interview - December 21).

Mark also shared his team members were working more independently. As a result of the public health measures, communication between Mark’s team, like Jenny’s, had transitioned to online mediums like e-mail. There were no more regular meetings, and when they did happen,

they were virtual: “We don’t have regular meetings anymore. It’s almost as if our group has dispersed. We have zoom meetings but it’s not the same thing right. Mark shared that there was less socialization between the team” (Interview - December 21). He recalled how people used to engage in “water cooler discussions” but that does not happen anymore now: “I think sometimes that is important, because we miss that. When we’re so busy with our caseload that we don’t get to run into each other, and to chit-chat, and to say how each one of us are doing” (Diary - June 12).

This was comparable to Jenny’s situation, as she also described her team as socially distanced. Though there was some deterioration of some previous relations, Mark shared that redeployment granted him another way to connect with colleagues and build new relationships: “When I’m screening, colleagues come and go. And it’s a great opportunity to connect with colleagues, and to chit chat with colleagues” (Diary - June 16). Jenny shared this same experience of working with people she normally did not work with. Another major change in Mark’s support system at the clinic was that he could no longer rely on his boss.

5.2.2.3.2 Primary care clinic management

Mark’s boss was supportive but about halfway through wave 1, his boss was let go unexpectedly: “Our boss two weeks ago was walked out. So, for seven years he supported my role quite a bit, he supported my role especially for me to go back to school, to work on my PhD, and allowed me to have one day of research publication, and I got a large grant I brought to the hospital here. But now he’s gone. The new person who is going to be hired, I don’t know if they are going to support my role or not, if they are going to support my research role or if they are actually going to say no, we didn’t hire you to be a researcher for one day a week, we want you in more of a

clinician role” (Interview - December 21). Conversely, Jenny’s experience with management was the opposite. She initially felt unsupported but then later, felt more supported. Mark, on the other hand, was initially more supported but then later less supported with the loss of his boss. As a result, there was a gap in his support system that he relied heavily on before the pandemic. A new manager was due to be hired.

5.2.2.3.3 Provincial authorities

As for support from provincial authorities, Mark shared that he only felt supported when he did what as expected of him: “We feel supported if we follow their and vision and decision-making process, we feel supported if you follow the instructions but if you don’t agree with them, then the support may not be there. It’s a one-way support” (Interview - December 21). The policies that these governing bodies created and enforced affected Mark emotionally in different ways.

5.2.2.4 Physiological mode

5.2.2.4.1 Senses

In the beginning of the pandemic, when Mark was not able to practice his primary role in full scope, he felt frustrated with not being able to help his patients: “But unfortunately, I am not able to help out that population at the present time, because I am not able to run groups in person. So, it’s kind of frustrating” (Diary - May 22). Jenny felt the same way with not being able to help her patients. The public health measures during wave 1 also threatened Mark’s job security which

led Mark to feel anxiety mixed with confusion and uncertainty. He expressed how he felt: “How do I feel about that? Not very good. Very unsettling” (Diary - May 27).

Later, in December 2020, at the start of wave 2 in Ontario, Mark shared how the fear he felt during wave 1 of the pandemic had lessened: “I’m not as fearful as I was before that’s one thing. First time I was like okay, we are going into the trenches here, I don’t know what to expect but now that we know what to expect, we have more equipment, we are more knowledgeable, I think that we are much more open, not as resistant, to being frontline” (Interview - December 21). Jenny had also shared how a lot of the initial worry and fear was due to the lack of knowledge about the virus. Like Jenny, during wave 1, Mark was very fearful with regards to working on the frontline and what that meant for his health.

5.2.2.4.2 Protection

Both Mark and Jenny worked on the frontline during wave 1 and 2 of the pandemic. Mark was concerned about the risk of exposure. Mark shared that he wanted to help people but at the same time, he did not want to expose himself to the virus: “And then you want to help but at the same time you just want them to leave, because at the same time you’re just more exposed to asymptomatic patients who have COVID-19” (Diary - June 16). As a frontline worker, screening people before they went into the clinic, Mark thought it was just a matter of time before he got infected. Mark shared an experience he had with a patient while redeployed working as a screener at the family practice clinic. The patient was not respecting the protocols, and Mark expressed how dangerous this was for him: “I go to places where my mind takes me, where it’s like if I were to die, who’s going to pay for my funeral expenses?” (Diary - June 29). To protect himself from the

increased exposure to the virus, Mark shared: “Being very cautious and very careful with hand hygiene, infection control” (Diary - June 9). Same as Jenny, Mark added using full PPE like masks and face shields as another source of protection. Thus, working during the pandemic affected Mark on a physiological level but also a physical one.

5.2.2.4.3 Activity and rest

The shift work of redeployment affected Mark’s daily routine: “But the issue is that my shift is around twelve to four, which means that I have to have lunch between 11 and 12. And that’s really early to have lunch. And then if I have to use the bathroom or anything, I have to ask a colleague to step in” (Diary - June 16). Later, the second wave, Mark reflected on how he was running full steam for months. Jenny’s experience was similar as she described feeling mentally and physically taxed.

Mark would have liked to take some time off to take care of himself: “Mandating that, I think would be very helpful, saying that you need to have a day off here and do this, or we book this appointment for you at massage or we took the rest of the afternoon off for you to go to the gym or something like that would be so helpful...” (Interview - December 21). Mark reflected that as a clinician, he was encouraging people to take a break but not doing as he preached: “We have just order this for you or blocked this time off for you. Because no one’s going to do it. Even though clinicians should be doing it for themselves we were not doing any of that, right. We tell our patients that they should be doing it, we’re not doing it” (Interview - December 21).

5.3 Conclusion

This chapter presented the results of this project. A total of four cases were presented: Ainsi, a respiratory therapist from Manitoba, Maria, an occupational therapist from Manitoba, Jenny, a respiratory therapist from Ontario, and Mark, an occupational therapist from Ontario. A chronological order of public health measures in each province of interest and a brief introduction of each participant were provided to establish context. The case presentation itself was organized as per the four modes of the Roy Adaptation Model. The role identity mode gave a longitudinal view of how the role of the primary care allied health professional changed through the course Wave 1 and beginning of Wave 2. The group identity mode highlighted how working during the pandemic affected the provider's professional identity. The interdependence mode helped frame how the provider's relationships with others in their work setting changed. Lastly, the physiological mode captured how working during the pandemic affected the provider's personal health. The experiences of all the cases presented in this chapter were similar in some respects but also unique and different. The next chapter will further discuss the results and explore the implications of the findings.

Chapter 6: Discussion

This chapter discusses the results presented in the previous chapter. More specifically, it demonstrates how the research objectives were achieved. This project had 2 objectives: (1) To describe how mandated public health measures impacted primary care allied health professionals in their clinical practice (2) To compare and contrast the impact of public health measures on the practice of primary care allied health professionals between Manitoba and Ontario. Consequently, for objective 1, a summary of each individual case is provided with a focus on how public health measures impacted them. Then, for objective 2, Ontario and Manitoba cases are compared by identifying similarities and differences between the two provinces. The discussion explores whether the results of this project either support or provide an alternative perspective in relation to the findings of the literature review. The discussion is organized in a similar fashion as the literature review. Finally, the last part of this chapter, highlights this project's strengths and limitations, and presents its implications for future research.

6.1 Objective 1

To describe how mandated public health measures impacted primary care allied health professionals in their clinical practice, the summaries for each of the cases are outlined below. Each case summary describes the unique experience of the respective primary care allied health professional.

6.1.1 Ainsi case summary

During the pandemic, Ainsi experienced a primary role reduction with not being able to conduct spirometry and having to transition to connect with patients remotely. During wave 1 in Manitoba, Ainsi was redeployed part-time 2-3 times which led to repeated disruptions in adjusting to his adapted role. Ainsi was adequately protected with the appropriate PPE while working at these high-risk sites and did not hint to any challenges with procuring what he needed. Redeployment challenged his group identity with having to do tasks that did not compliment his respiratory therapy training and scope of knowledge. Ainsi credited his primary care clinic team and manager for their support and in helping him adapt. When Ainsi was redeployed and public health measures were enacted, he lost social rapport with his team. But, towards the end of wave 1, when case numbers were low and there was some return to normalcy, he was able to rectify those relationships. Some of the initial worry that Ainsi experienced at the start of the pandemic reappeared at the announcements of re-opening the province. He relied on his manager and clinic team with working during these periods of closures and re-openings. Conversely, Ainsi did not feel the same level of support from the government as he did from his clinic team. Ainsi shared that the provincial authorities made him feel expendable. With the onset of wave 2, Ainsi was due to be redeployed full-time. However, the transition to this redeployment role was turbulent. Ainsi shared how the timeline and implementation changed frequently. This caused major disruptions with conducting his primary role duties.

6.1.2 *Maria case summary*

During the pandemic, Maria was subjected to redeployment. Her first redeployment was part-time and limited her ability to practice as an occupational therapist. Maria found redeployment to be unpleasant because the roles did not align with her professional identity, and she felt that her work as an occupational therapist was in more of a need by the community. She would have liked provincial authorities to have assigned roles as per profession scope. Having to juggle between working at three different sites, at the redeployment site, at home and in the clinic was physically demanding. There were a lot of rapid changes being made which made it hard to adjust. Being redeployed created feelings of grief and only when she returned to her primary role did she express relief and happiness. When Maria returned to her role full-time in mid-summer due to a decrease in case numbers and lifted restrictions, Maria worked hard to prove her profession's worth in the eyes of provincial authorities. The more significant impact on Maria's primary role was the transition to remote care. It created additional stress to her workload with having to coach the patients through how to use the virtual platforms. Despite the added obstacles, Maria was very committed to problem solving and finding creative solutions to continue servicing her patients. During this period of the pandemic, Maria relied on the support of her manager. But communication between her team became less frequent and virtual. Toward the end of summer, case numbers started to rise. In December 2020, Maria faced the possibility of being redeployed full-time, once again restricting her from doing her primary role.

6.1.3 Jenny case summary

With the onset of wave 1 of the pandemic, Jenny was no longer allowed to do part of her primary role of spirometry. Her role changed in other ways with only being able to connect with patients remotely, working from home, and being redeployed. The start of the pandemic for Jenny was riddled with a lot of worry. She recalled her experience of working during the H1N1 pandemic. Despite the seriousness of the virus and the increased risk of exposure as a frontline worker, Jenny chose to be redeployed at a number of different sites during the length of the summer. She was redeployed to swab residents at a senior living facility, and swab and screen at COVID assessment centres. Jenny saw redeployment as an opportunity to advance her profession. But also redeployment allowed Jenny to remain connected to her clinical identity as a respiratory therapist. Due to the strict public health measures, Jenny was not allowed to see patients in person and missed the clinical aspect of her role. She expressed how not being able to help her patients made her feel helpless at times. Starting in May, even when Ontario moved toward re-opening services, Jenny's profession continued to see patients remotely. She continued to do her role in an adapted way by running programs virtually and adjusting to meet the changed needs of her patients. Toward the end of the summer, she regained some of her previously lost primary role of doing patient home visits. But, spirometry was one part of Jenny's role that did not resume during wave 1 and 2 of the pandemic. Jenny worked to create guidelines to resume the service as per the parameters of the pandemic but the lack of access to the necessary resources was a big hurdle. Jenny was adequately protected with the appropriate PPE at redeployment sites. But acquiring PPE to resume spirometry was difficult because the clinic did not have access to the provincial supply of PPE. Otherwise, Jenny generally felt supported by the provincial authorities. Similarly, the relations between Jenny and her clinic management were good in some respects and not so good in others. Support from

management was lacking at the beginning of the pandemic but later improved. At the clinic, Jenny's primary care team relations also changed. She described a greater social disconnect between team members. In addition to feeling socially isolated, Jenny shared being physically and mentally exhausted with working during the pandemic. She was redeployed, working long hours and different sites but also supporting her patients in ways she did not before. In December 2020, with the onset of wave 2, Jenny was redeployed again. She was working at a new site, the influenza-like-illness clinics.

6.1.4 Mark case summary

The public health measures in response to wave 1 of the pandemic in Ontario, led to Mark losing part of his primary role. The reduction in his primary care role was replaced with redeployment. Mark was redeployed at three different places throughout wave 1. These redeployment experiences affected Mark identity as a healthcare professional. Mark felt his work was being undervalued and not taken seriously, especially when redeployment tasks were not directly related to his professional identity. Redeployment also put Mark at an increased risk of exposure which he was very concerned about in wave 1. He used PPE to protect himself during this time. Toward the summer months, Mark focused more on his adapted role which largely involved the incorporation of technology. He connected with patients virtually and conducted group programs virtually. His team was also adjusting to the new distanced way of connecting with one another. However, he faced a major obstacle midway through wave 1, as his boss was let go. Mark relied heavily on the support of his previous manager. As the pandemic progressed, more information about the virus was made available and Mark's initial fears of working during the

pandemic lessened. When Ontario was on the bout of wave 2, Mark was still doing his adapted role but was soon to be redeployed. He shared that working during the pandemic had been a physically taxing experience.

Objective 1 was successfully achieved. Provided above are summaries of how the COVID-19 public health measures implemented in Ontario and Manitoba impacted the primary care practice of the respective providers. Next, this chapter presents how objective 2 was achieved.

6.2 Objective 2

To compare and contrast the impact of public health measures on the practice of primary care allied health professionals between Manitoba and Ontario, below is a summary of the similarities and differences of the pandemic response between the two provinces.

The pandemic experience between Manitoba and Ontario varied mainly because wave 1 and wave 2 did not hit at the same time and both waves lasted different lengths in time. In fact, the first wave did not hit Manitoba as hard as Ontario. The province of Ontario saw active cases for at least two months before the provincial government declared a state of emergency. A province wide lockdown immediately followed. Conversely, the province of Manitoba entered a state of emergency a week after their first reported case, and public health measures and policies for the closure of services were implemented. Ontario did not enforce a lockdown until a few weeks after the state of emergency had been declared. In Ontario, redeployment was optional whereas in Manitoba, redeployment was mandatory. Another stark difference between the two provinces was the timeline of re-opening. Manitoba started re-opening before Ontario did and progressed through the stages of re-opening faster than Ontario. As per wave 2, Manitoba was hit earlier than Ontario. Manitoba implemented province wide mandatory mask measures in late August whereas Ontario did not do so until October. Manitoba was at the height of wave 2 in the beginning of December when interviews were being conducted with the study participants. In comparison, Ontario was still gearing up at that time. The height of wave 2 did not hit Ontario until the end of December, until after the interviews had been conducted. Same as in wave 1, during wave 2 redeployment in Ontario remained optional but mandatory in Manitoba. Overall, wave 1 hit Ontario first but they implemented public health measures slower, so re-opening took longer but the onset of wave 2

was also delayed and less severe. In Manitoba, it was the inverse; Wave 1 hit Manitoba later but they implemented public health measures quicker, so re-opening progressed faster but the onset of wave 2 was also quicker and harder.

6.3 Discussion

6.3.1 Change in role and services

6.3.1.1 Role reduction

The public health measures implemented by both provinces, Manitoba and Ontario, called for decreased in-person contact. This led to primary care clinics cancelling in-person assessments and in-group programming. Lotta et al. (2020) found that public health measures resulted in community health workers in Brazil no longer doing home visits, which had previously encompassed a large part of their role. Similarly, all of the allied health professionals in this Canadian study also dealt with some degree of role reduction in primary roles. There are many instances where the public health measures as per the province affected allied healthcare professionals differently, but there are also some instances where there is similarity between the same professional despite working in different provinces.

The reduction in their primary role is one example. In the case of occupational therapists, they had to stop conducting in-person groups for their patient populations. In the case of respiratory therapists, they had to stop conducting lung function testing, spirometry.

The timeline to resume roles varied between the two provinces. Wave 1 in Manitoba ended before Ontario and thus Manitoba started resuming in-person care before Ontario. The allied health

professionals in this study working in Manitoba temporarily started seeing patients in person before the providers working in Ontario. Maria temporarily regained the ability to do home visits in June. As did Jenny too in Ontario, in June, a few weeks after Maria. But this progress was shunted again with the onset of wave 2 which happened in Manitoba before Ontario.

In December 2020, allied health professionals working in Manitoba experienced a second bout of role reductions. At this time, Ontario allied health professionals were still sporadically seeing patients in-person. Despite this brief return to re-introducing previously reduced roles, some primary roles never resumed like lung function testing for Jenny and Ainsi. Furthermore, spirometry can only be done in person and cannot be conducted virtually or remotely which both provinces encouraged as the primary method of service delivery. Therefore, Jenny and Ainsi were more disadvantaged with not being able to do spirometry as it was a main component of their primary role. Mark and Maria also equally felt the stress of not being able to help their patients in the same way they did before the pandemic, however parts of their role were more transferable to a virtual format, as compared to Jenny and Ainsi.

6.3.1.2 Transition to virtual care

Similar to Kalmroth-Marganska et al. (2021), we found that virtual care was more compatible with some professions, and not others. This is important to note because the transition to remote and virtual format was the main approach used by primary care clinics to abide by the public health measures and continue to serve their patients. Donnelly et al. (2021) reported that after the start of the pandemic, more than 75% of patient-non-physician provider interactions in Ontario Family Health Teams happened remotely. Shortly after Manitoba and Ontario declared

their respective emergency orders, all of the allied health professionals in this study switched to connecting with patients over the phone, over e-mail and over other virtual platforms.

The switch to virtual formats in both provinces was sudden. This corroborates the findings of Bearne et al. (2021) and Breton et al. (2021) that technology was heavily relied upon by care providers during the pandemic. Mark and Maria adapted their in-person groups to happen via virtual platforms. Jenny and Ainsie also transitioned to providing smoking cessation groups virtually. All of the participants commented on the advantages of providing care virtually, such as being able to follow-up with patients more frequently. A few of the participants also reflected on the disadvantages, for instance, preferring phone calls over virtual platforms because they had a hard time learning how to use virtual means.

The switch to virtual care allowed providers more flexibility, including flexibility in workplace setting. The allied health professionals in this study worked from home some days of the work week. Bentham et al. (2021) and Moey et al. (2021) explained how public health measures focused on reducing in-person contact directly influenced this move of primary care providers to work from home. All of the allied health professionals in this study worked in a number of different settings: a primary care setting, home setting, and redeployment setting. Working from home was completely new to these primary care providers. The concept of primary care providers working from home was seldom seen in the past.

6.3.1.3 Redeployment

All of the allied health professionals in this study experienced various levels of redeployment. The literature review findings showed that the experiences of primary care providers with redeployment were variable (Donnelly et al., 2021; Moey et al., 2021). This was also the case with the allied health professionals in Manitoba and Ontario. Their experiences varied based on two different axes: (1) province, (2) personal convictions. Manitoba and Ontario had different timelines and approaches to the redeployment of allied healthcare professionals. Wave 1 hit Ontario before Manitoba and was worse due to higher case numbers per capita (Little, 2020). Thus, the Ontario allied health professionals in this study were redeployed first and for longer periods of time. The redeployment in Ontario initially started out off-site from the primary care clinic and then moved on-site at the primary care clinic. The allied health professionals in this study working in Ontario had a lot of variety in the redeployment they did. Both Jenny and Mark worked at least 3 different redeployment roles.

Additionally, as per the experiences of the Ontario providers in this study, redeployment in Ontario was not mandatory. Both Jenny and Mark continued to be redeployed throughout the length of wave 1 out of choice. Wave 2 hit Ontario after this study was completed, so there is limited insight into the redeployment of these professionals during that wave. Conversely, allied health professionals in Manitoba were redeployed for a shorter period during wave 1. But, as the Manitoba providers in this study reported, redeployment was mandatory. The redeployment during wave 1 in Manitoba was initially on-site at the primary care clinic, then moved off-site and then returned to on-site. The allied health professionals in Manitoba in this study also did not have much variety in the redeployment roles they did. Ainsie and Maria shared that their redeployment roles

were either screening or swabbing patients for testing. The Ontario providers in this study also did these same roles, but they were involved in the pandemic response in other capacities as well. Jenny assisted her primary care clinic in setting-up and running an influenza-like-illness clinic. Mark was redeployed to work on at a surgical outpatient unit.

Wave 2 hit Manitoba earlier and harder than Ontario. The allied health professionals were due to be redeployed off-site and the redeployment was mandatory once again. During the interviews, Ainsie and Maria were told that they were going to be redeployed and to stop their adapted role, with no knowledge about where they were going to go and when and for how long. Therefore, there were a lot of uncertainty with redeployment in Manitoba and it impacted providers negatively.

The experience of redeployment was affected by the allied healthcare professional's personal convictions. This is another instance where similarity existed based on the same profession and not province of practice. The respiratory therapists in this study used redeployment to promote their profession to other providers and showcase their skills. Whereas the occupational therapists in this study saw redeployment as a task they had to do but would rather not do. Regardless of the differences, all the allied health professionals in this study identified that redeployment that was reflective of their profession's scope of practice would have been the best, but that it was not always the case.

6.3.1.4 Change in services

When Mark was redeployed to work at the outpatient surgical unit, he had to learn how to cater to the needs of this new patient population. With redeployment, all allied health professionals in this study in both provinces were exposed to working with new patient groups. But the needs of the pre-existing primary care clientele of these professionals also changed. All of the allied health professionals in both provinces had to adapt their practice to accommodate the new needs of their respective patient populations. Maria shared how there was a shift away from chronic care pain management and towards managing the mental and health issues related to the COVID-19 pandemic. Similarly, Jenny shared how she was helping her patients work less through respiratory issues and more through issues like food security or mental health issues related to the pandemic. Donnelly et al. (2021) noticed a similar shift in the interprofessional primary care provider sample they studied. The providers reported doing the same types of services as Jenny, Mark, Ainsie and Maria, not native to their professions, like providing mental supports and resource navigation.

All of the healthcare professionals in this study had to take on new learning during the pandemic. At redeployment sites, they had to learn to work in a new setting, with new colleagues, doing new tasks and servicing new patients. At their primary care clinic, they had to learn how to do their role in an adapted way and learn to work in a new environment that had been reconfigured as per public health measures. The allied professionals frequently referred to the term, “the new normal”.

6.3.2 *Change in team dynamics*

In both provinces, the ‘new normal’ encompassed public health measures that encouraged distanced provider-patient relations and distanced provider-provider relations. Allied health professionals in this study had to learn to navigate this distanced work setting. Lim et al. (2020) and Sullivan & Philips (2020) reported that communication between teams shifted to virtual formats because team members were displaced working in different settings like home or at redeployment sites. Allied health professionals in this study reported the same.

In both provinces, the primary mode of communication was via Zoom, or other electronic formats like e-mail and Electronic Medical Records. Consequently, communication frequency between the primary care team members in both provinces also decreased significantly. Despite the universal decline in communication, as per their experiences of the participants in this study, Manitoba teams attempted to maintain team togetherness more than teams in Ontario. The two allied health professionals in Manitoba reported more consistent team meetings. In comparison, the two allied health professionals in Ontario shared working more independently.

In addition to a change in team members connecting on a professional level, there was a universal decrease in social connectivity as well. Ainsie, from Manitoba, shared how his team used to go on walks at lunch time but stopped doing that during the pandemic. Mark, from Ontario, also shared how his team stopped having short conversations in the hallways. Lim et al., (2020) also found that the social relations within primary care teams suffered and explained that the social and professional distance between team members during the pandemic led to diminished understanding of the different provider roles in the team. This was one area of notable difference between Manitoba and Ontario. In Manitoba, the cases studied here suggest the pandemic more heavily

impacted the awareness about the roles of allied health professionals in primary care teams. Both Ainsi and Maria shared that the distance within their team members, created by public health measures, affected their ability to promote their role. Whereas in Ontario, the allied health professionals in this study were more integrated into the primary care teams and actively educating about role scope was less of a concern. Both Jenny and Mark shared that there was no change in the team's understanding about their respective allied health roles.

6.3.3 Change in management support and resources

During the pandemic, in addition to their immediate primary care team, allied health professionals relied on two other sources for support, clinic management and provincial authorities. As per the support from clinic management, allied health professionals in this study working in Manitoba reported more positive experiences. The primary care clinic managers in Manitoba were seen to be attentive to the needs of allied health workers. Maria shared how her clinic manager advocated on her behalf to lessen the frequency of redeployment because it was negatively affecting her role. Similarly, Ainsi shared how his clinic manager was supportive of his decision to work in office versus from home because the ergonomic set-up was better for him in office. In comparison, the support provided to Ontario primary care allied health professionals in this study from clinic management was more variable. Both Jenny and Mark experienced times where their clinic managers were equally as supportive as the managers in Manitoba but also experienced other times where they were not as supportive – or in Mark's case, absent.

Support provided by provincial authorities also varied between provinces. On a global level, the lack of consensus in the support provided by the governing bodies of different countries

is obvious. Moey et al. (2021) reported that during the pandemic, Singaporean authorities provided primary care providers with frequent updates and adequate PPE. Conversely, Fernandez & Lotta (2020) found authorities in Brazil significantly lacked in provision of appropriate guidance and resources, which left healthcare workers feeling unprepared. The existing literature informed of a difference in support across countries. The results of this study show there were many differences even within the same country. In Canada, there were differences between how provinces experienced the pandemic, differences in provincial responses to the pandemic and differences in the support and resources provided to healthcare workers by their respective provincial authorities. In Manitoba, as per the experience of the providers in this study, the provincial government was more controlling. The government regulated more closely what healthcare workers were doing and what services would resume and when. Ainsy shared his frustrations with having to wait for approval from the Manitoba provincial authorities to resume spirometry. Likewise, Maria shared how at one point, the provincial authorities had told her to stop virtual group programming, so that she could be available upon request to be redeployed. Conversely, the government of Ontario had a more distanced yet guided approach. The government of Ontario provided guidelines and frameworks which were applied regionally as per the discretion of local health units. Jenny shared how she had to present a proposal to her clinic for resuming spirometry.

Another area of difference between the provinces was the access to PPE. In this study, allied health professionals working in Manitoba reported ample access to PPE. However, in Ontario, access to PPE was better in some settings and more restricted in other work settings. The cases of Ontario allied healthcare providers, like in Manitoba, had ample access to PPE when working at redeployment sites. But access wavered when working in primary care clinic. Jenny shared how resuming spirometry required the compilation of resources like N95 masks and the

responsibility for procuring such PPE fell to the responsibility of her clinic. Jenny was very frustrated with the province's lack of ability to provide her the necessary resources. Frustration was just one of many emotions allied healthcare providers experienced during the pandemic.

6.3.4 Change in allied healthcare provider's health and emotional status

Primary care allied healthcare providers studied here, in both provinces, experienced similar emotions but at different times, because the timelines of wave 1 and wave 2 were different. At the onset of wave 1, providers in both provinces felt anxious. Londoño-Ramírez et al. (2021) also reported that providers working in primary care settings experienced heightened anxiety during the first six months pandemic. There was a lot of fear due to the new and unknown nature of the virus. Smallwood et al. (2021) found, there was increased concern for the wellbeing of loved ones, as providers in this study in both provinces expressed fear over self-exposure and potential transmission to family. The providers in this study sample shared the same concerns with not wanting to expose loved ones as they worked in high-risk settings. But, as the pandemic progressed and more information about the virus was available, the providers shared how their initial fears were reduced.

Additionally, the rapid changes to their practices due to the equally rapidly changing policies left providers feeling uncertain about the future. The anxieties temporary subsided toward the end of wave 1 with case number decreasing, changes in policy slowing down, resuming roles, and more information about the virus. But anxiety, fear and uncertainty returned among providers with the onset of wave 2. During wave 2, primary care allied healthcare professionals in this study working in Manitoba reporting feeling anxious because redeployment was made mandatory in

Manitoba, but also because the timeline as to when and where they would be redeployed was unclear. Wave 2 in Manitoba was more severe and started earlier than in Ontario and the providers in Manitoba had less control over what they would be doing and where they would be redeployed. The providers in Manitoba reported that they felt like they were left hanging because they halted their primary role responsibilities in preparation for redeployment, but information about where and when they were to be redeployed was not conveyed appropriately, so there was this uncomfortable lag period.

Overall, most of the emotions experienced by primary care allied health professionals in this study in both provinces were negative. They felt frustrated, angry, voiceless, overwhelmed, and undervalued. However, like Donnelly et al. (2021) found, despite all the negatives, there were some positive emotional responses. Allied health professionals in both provinces did express feeling good with contributing toward the pandemic response and working during a time of need, even if it was mentally and physically taxing.

Primary care allied healthcare professionals in this study in both provinces experienced heightened mental strain and physical exhaustion with working during the pandemic. Providers shared how dealing with frequent schedule changes was hard. Being unable to practice to the fullest extent and hearing about how much patients needed their help was also challenging. During wave 1 and 2 of the pandemic, allied health providers in this study in both provinces were managing working across up to three different sites at a time. For example, at one time during wave 1, Jenny was juggling working between a COVID-19 testing centre, a congregate care home, and her primary care clinic. Working between all these different sites impacted the physical health of providers.

Furthermore, the pandemic response relied heavily on healthcare workers and thus providers in this study were working hard and long hours. Siddiqui et al. (2021) found that primary care professionals wanted more supports directed toward their mental health. The providers in this study also addressed this point. For example, Mark shared that though he was recommending his patients to focus on their physical and mental health, he was not doing the same. He felt more support should be offered to providers in maintaining their health especially since the pandemic was so taxing.

6.4 Strengths and Limitations

This project and its achieved objectives are unique and contribute to fill a gap in the existing literature on the experience of the COVID-19 pandemic in Canada. The COVID-19 pandemic has not been frequently compared to other past public health issues in terms of severity and breadth of impact. Its recency means research is still being conducted; there are a lot of gaps to be filled and a lot of different avenues to be investigated. This project focused on researching the pandemic in the frame of the primary care sector. The findings of this thesis help grow the existing limited pool of knowledge in several different ways.

(1) The existing literature comes mainly from outside of Canada and thus limits applicability to Canadian circumstances. The results from the existing foreign literature were muddled with primary care structures that do not correspond with the system in Canada and do not include the same pool of primary care allied health workers as per Canadian standards. This thesis strictly sampled Canadian primary care allied healthcare workers and thus provided data specific to the experience of pandemic in the primary care landscape in Canada.

(2) There is very limited existing research on the experience of allied healthcare providers during pandemics. Nurses have been most often the centre of non-physician focused primary care studies. Allied health professionals like respiratory therapists and occupational therapists are underrepresented in the literature. The havoc of pandemics can easily lead to primary allied healthcare providers being under-looked, under-valued, and under-utilized, due to their lower number of professionals compared to primary care nurses and physicians. This lack of research is most notable for professions that are new to the sector of primary care, as is the case with respiratory therapists in Manitoba. This project contributed to filling this gap in researching this understudied group of professionals during the pandemic.

(3) This thesis is the first to conduct a comparison of the pandemic experience between two provinces. An interprovincial comparison is important to studying the pandemic in Canada because of Canada's decentralized health care system. Comparisons are valuable because they help to identify what worked best and what areas need improvement.

(4) The conceptual framework, the Roy Adaptation Model, had never been used to study adaptation during a pandemic, and the studies cited in this discussion are mainly a-theoretical in nature. This project was the first to use this model in this manner. The deductive application of this model offered a richer description of the cases than a purely inductive approach. The model supported the analysis of data by allowing me to build on the existing conceptualizations of adaptation.

Some of the limitations include:

(1) I found applying of the Roy Adaptation Model to study the experience of allied health professionals during the pandemic as per the needs of this thesis was difficult. Previous studies

applying this model are used in Nursing and about individuals adjusting to physiological health change. For example, Jennings (2017) used RAM in a case study looking at individuals with anorexia nervosa. In this study, the modes were used to indicate how nurses could better support the patient. Therefore, the stimuli in most existing research that applied RAM as a framework is about disease and how the individuals adapt and adjust to their disease(s). In contrast, this thesis applied RAM to a social change – the imposed public health measures. Thus, I found that when used in the latter fashion, there were overlaps in the modes. Furthermore, some elements of the model did not apply at all, while other elements were not as important or as central. For example, in Jennings (2017), the physiological mode is discussed extensively, where electrolytes and urine concentration were important, but the role function mode was not as important. In this research project, it was the opposite, where the role function mode was central to adaptation, but physiological mode was not as important.

(2) Data collection started before full REHB approval was granted. The study team was not able to review the data until a later date at which point a large portion of the diary entry data had already been collected. As a result, we were limited in our capacity to follow the literature recommendations of the diary method, which calls for review of the data as it is being collected, to allow for asking of clarification and follow-up questions.

(3) The sample size of this study was very small. There was a total of four participants: one participant per profession per province. While consistent with case studies, that aim for depth rather than breadth, this limited the conclusiveness of claims that can be made about the impact of COVID-19 provincial public health order impacts.

(4) The findings of this study may lack transferability to other allied healthcare professionals, to other Canadian provinces, and to the other waves of the pandemic. The findings are very specific to the respective circumstances of the individual cases, though the similarities across the cases are striking.

6.5 Implications and Future Research

The findings of this project provided insight on a number of topics: (1) Pandemic response at the primary care level; (2) Allied health integration into pandemic response; (3) Differences in pandemic response between Canadian provinces; and (4) How macro policies affect healthcare professionals on a micro-level. The findings of this project are most helpful for future pandemic planning and has the potential to inform future primary care reforms. The findings of this project are of interest to policy makers to inform their decision-making process, other allied health professionals to conceptualize their personal experiences, and clinic managers to help them understand how to best support their staff in adapting to policy changes.

The primary care allied health professionals in this study highlighted how provincial policies affected their daily practices. They displayed their adaptiveness, and ability to continue helping patients in new ways.

A study investigating the pandemic in the same approach as this project has never been conducted before. Research on the pandemic is an emerging topic and this project acts a foundational building block to other future studies. Future research should be conducted with larger sample sizes. Future research should investigate how the pandemic policies impacted other

primary care allied healthcare professionals in other provinces and territories. A comprehensive study would be recruiting a sample from each allied health profession working in primary care settings across all provinces. It would also be interesting for a future study to compare the experiences between different professions. The findings of this project show that there is commonality in the experience of providers from the same profession regardless of which province they practice in. This would be another avenue to explore.

6.6 Conclusion

This chapter interpreted the findings of this project. It presented how the two objectives of this thesis were achieved. Then it explained the project findings in relation to the results of the literature review. A study investigating the experience of primary care allied health providers in Canada during the pandemic has never been conducted before. One notable strength of this project is to provide data specific to the primary care setting in Canada. However, there were some methodological limitations as the findings of this project have limited generalizability. The next steps for this research topic would be to recruit a larger sample size across all Canadian provinces and territories. This research topic is important because it investigates how policy changes during a large-scale public health emergency affected primary care providers.

Chapter 7: Conclusion

Pandemics are nothing new (Piret & Boivin, 2021). Countries have dealt with deadly viral outbreaks before. But the COVID-19 pandemic was a new phenomenon in many respects. The COVID-19 pandemic was the result of a new virus that infected millions across the globe. The pandemic caused large scale disruptions across every industry. Rapid changes happened at the microscopic level and macroscopic levels to keep people safe and reduce the level of infection and death. People saw changes in their personal relations, in their routines and jobs. Local, national and global authoritative bodies introduced new policies and procedures. The health care system was not exempt and underwent a series of reconfigurations. The health care system was heavily relied upon for support in pandemic response plans. Policy changes had a direct impact on the daily workdays of healthcare professionals. They had to adapt to changes in roles and work settings.

The purpose of this thesis project was to investigate such experiences during wave 1 and 2 of the pandemic in Canada. This project had a specific interest toward studying how public health measures impacted allied health professionals in the primary care sector in Manitoba and Ontario. Wave 1 and wave 2 of the pandemic hit the provinces at different times. The implementation of public health measures happened at different times between the two provinces. In addition, to capturing the individual experiences of allied health professionals during this time, this thesis also compared the experiences between provinces to further dissect how public health measures affected the day-to-day work lives of these professionals.

This project used a case study methodology to achieve the two study objectives. As a conceptual framework to guide data organization and interpretation, the Roy Adaptation Model

was applied. The four modes of the Roy Adaptation Model were of particular importance: the physiological mode, the role function mode, the interdependence mode and group identity mode. The main premise of this model is that adaptation to a stimulus, which in this case is the COVID-19 public health measures, can be studied using the four modes.

As for data collection, two methods were used sequentially to collect data from this study's participant pool. This study had 4 participants, 1 respiratory therapist from Ontario, 1 occupational therapist from Manitoba, 1 respiratory therapist from Manitoba, and 1 occupational therapist from Manitoba. Each allied health professional was requested to keep an audio diary focused on capturing the experiences during wave 1. Then, in December 2020, near the onset of wave 2, participants participated in an online interview. The data was analyzed using a coding framework developed via the framework analysis approach.

The thesis findings report that all allied health professionals in this sample shared some common experiences with working during the pandemic. All the professionals experienced reductions in their primary roles. Public health measures restricted them from practicing like before the pandemic. There was a lot of new learning. One of the biggest role adaptations all professionals faced was the transition to virtual and remote care. Their work schedules were also disrupted as they were redeployed at different sites to help with the pandemic response. All the allied health providers also experienced changes in work relations. With public health measures encouraging social distancing, primary care team relations became more distant. Clinic managers were generally supportive of their staff whereas support from government bodies was more turbulent. The professionals generally reported adequate access to PPE. Access to this vital resource was very important because the risk to their health had dramatically increased, especially

when working at COVID testing sites. Most allied health professionals took on the role of screeners or swabbing so they were in proximity with positive cases. Due to the high-risk nature of the pandemic, the allied healthcare professionals mostly reported feeling fearful, uncertain, and frustrated. These feelings were especially heightened near the onset of each wave because strict public health measures were implemented and thus a lot of changes to their roles ensued. Working during the pandemic was difficult for everyone, both mentally and physically.

Though there were a lot of similarities in their experience, one area of dissimilarity was the personal outlook the professionals had. Some of the providers saw the pandemic as a fruitful opportunity whereas for others it had a negative impact on their professional identities. As for the comparison between provinces, just like the individual experiences of professionals, there were points of similarity and dissimilarity. One significant difference was that the onset of wave 1 and 2 happened at different times between the two provinces and the varying degree of severity. Wave 1 happened in Ontario before Manitoba and was more severe which meant stricter restrictions for a longer period in Ontario. The opposite was true for Wave 2, as the re-surge in cases was faster in Manitoba than Ontario. Another difference between the provinces was the approach of government authorities. The authority bodies in Manitoba more closely managed what providers were doing. Redeployment was made mandatory, and providers had little say in where they would be redeployed and when. Whereas the response in Ontario was more regional and providers had more autonomy.

It is unavoidable for the primary care health system to remain unchanged after the COVID-19 pandemic. The term “new normal” was commonly used by providers to describe their reality of working during the pandemic. It is certain that some of the changes adopted during the pandemic

will remain and shape the future of primary care. The pandemic has been detrimental in many ways. It has resulted in the loss of life of millions, it has been economically taxing, and it has stressed health care resources and workforce. But the pandemic did allow the health care system to deviate from its stagnant way of operating and introduce new processes. It has allowed providers to explore new ways of doing their roles or identify which aspects of their role ought to stay the same. The future of the primary care landscape looks different, and it will be interesting to see how it evolves.

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Appendix A

Table 3 Literature review search strategy keywords for Medline

Heading	Keywords
COVID-19	(coronavirus* or corona virus).ti. or (novel coronavirus*.mp. and (exp china/ or china.mp.)) or ((pneumonia.mp. or exp pneumonia/) and Wuhan.mp.) or ((exp coronavirus/ or coronavirus*.mp. or corona virus*.mp.) and (wuhan or beijing or shanghai or 2019-nCoV or nCovor or COVID-19 or SARS-CoV-2).mp.) or (('COVID-19' or '2019-nCov' or 'SARS-CoV-2').mp. or exp Coronavirus Infections/)
Public health measures	(public adj3 (health or healthcare) adj3 polic*).mp. or (public adj3 (health or healthcare) adj3 measure*).mp. or (public adj3 (health or healthcare) adj3 mandate*).mp. or ((health or healthcare) adj3 polic*).mp. or ((health or healthcare) adj3 measure*).mp. or ((health or healthcare) adj3 mandate*).mp. or (government adj3 (health or healthcare) adj3 polic*).mp. or (government adj3 (health or healthcare) adj3 measure*).mp. or (government adj3 (health or healthcare) adj3 mandate*).mp. or (Public Health/) or (Health policy/ or health care reform/ or international health regulations/) or (Health Services Accessibility/ or Health Policy/ or "Delivery of Health Care"/ or Hospitals, Public/ or Health Services/) or (mandatory programs/ or mandatory reporting/ or mandatory testing/) or (Government/ or Policy Making/ or Primary Health Care/) or (Disease Outbreaks/ or Communicable Disease Control/) or (Global Health/)
Allied health professionals	(allied adj3 (health or healthcare)).mp. or (allied adj3 (health or healthcare) adj3

	<p>profession*).mp. or (allied adj3 (health or healthcare) adj3 occupation*).mp. or (allied adj3 (health or healthcare) adj3 personnel*).mp. or (Physiotherap*.mp.) or (Physical therapist*.mp.) or (Respiratory therap*.mp.) or (Occupational therap*.mp.) or (Allied Health Occupations/ or Health Personnel/ or Allied Health Personnel/) or (Patient Care Team/) or (Physical Therapists/) or (Occupational Therapists/) or (Respiratory Therapy/)</p>
<p>Primary care setting</p>	<p>(primary adj3 (care or health or healthcare)).mp. or (primary adj3 (care or health or healthcare or medical) adj3 service*).mp. or (primary adj3 (care or health or healthcare or medical) adj3 cent*).mp. or (primary adj3 (care or health or healthcare or medical) adj3 clinic*).mp. or (community adj3 (care or health or healthcare)).mp. or (community adj3 (health or healthcare or care) adj3 service*).mp. or (community adj3 (health or healthcare or care) adj3 cent*).mp. or (community adj3 (health or healthcare or care) adj3 clinic*).mp. or (Primary Health Care/) or (Community Health Services/ or Health Services/) or ("health care facilities, manpower, and services"/ or "health care economics and organizations"/ or health services administration/ or comprehensive health care/ or primary health care/ or "continuity of patient care"/ or patient-centered care/ or progressive patient care/ or "delivery of health care"/ or culturally competent care/ or delegation, professional/ or "delivery of health care, integrated"/ or health care reform/ or health services accessibility/ or managed care programs/ or telemedicine/ or point-of-care systems/ or "Delivery of Health Care"/) or (Family Practice/) or (Community Medicine/)</p>

Appendix B

Information on the Larger Project

This thesis project was a subset of a larger research project. The larger project encompassed of 16 participants, 4 of which were purposefully sampled of this thesis. The objectives of the larger project are listed below. This thesis sought to achieve Objective 2c of the larger project.

1. Identify challenges presented by practice and situational changes required by COVID-19 for primary care rehabilitation professionals, across micro, meso, and macro levels.
2. If the sample variation permits, compare the experiences of:
 - a. Primary care rehabilitation professionals who are new to the team (i.e., less than two years) versus those who have been team members for two or more years.
 - b. Primary care rehabilitation professionals by profession (occupational, physical, and respiratory therapists).
 - c. Primary care rehabilitation professionals by province.
3. Identify supports that primary care rehabilitation professionals and their patients could benefit from in response to COVID-19's ongoing impacts, and for future emergency preparedness strategies.
4. Enhance theory regarding occupational disruption.

5. To explore in access to primary care rehabilitation practice during the COVID-19 pandemic from the perspective of providers, applying a lens of equitable access.

Appendix C

Diary Entry Prompts

First entry: Describe what's happened, and what's changed in your practice, since the start of the COVID-19 public health measures in your community

Subsequent Entries:

1. What did you do today at work that was different than the way you did it before the COVID-19 pandemic? What, specifically, was different? How did it go? How did it make you feel?

AND/OR

2. What did you do at work today that was something you did not imagine needing to do, before the COVID-19 pandemic? What was unusual about this? How did it go? How did it make you feel?

AND/OR

3. Describe how your practice has changed since you last journalled. How does this make you feel? What is your sense of the reason for that change?

AND/OR

4. How has the new work environment as a result of the COVID-19 pandemic affected your work relationship with your colleagues?

PLUS

5. What else would you like to share about work today?

Appendix D

Interview Guide

Demographics:

1. How many years have you practiced as an OT/PT/RT?
2. How long have you worked in this primary care setting?
3. Is this your first job in primary care?
 - a. (If yes, move to MICRO questions)
 - b. (If no, ask these:)
 - i. How many primary care clinics have you worked in?
 - ii. How long in total have you worked in primary care?

Micro/personal questions:

4. At the time of your last diaries in (date), you were (SUMMARIZE)...
 - a. Please catch me up on what's happened since.
5. How similar is your current work with your pre-COVID responsibilities?
 - a. What does your workday look like now, compared with before pandemic?
 - b. Prompt, if needed: Please elaborate on how your work activities and responsibilities have changed.
6. Imagine you had full freedom to decide what you do in your workday, during this pandemic.
What would you be doing?

7. Did you see a difference in patient population now, compared to before the pandemic?
 - a. Were patients able to access your service?
 - b. How do the changes in service delivery impact your patients?
 - c. Do you think it had an impact on quality of care? If so how?

8. Do you think there are some patients that were unable to access your service?
 - a. If yes, who was unable?
 - b. Why were they unable?
 - c. What strategies did you use to try to reach them?
 - d. Is there anything more you wish you could do to reach them?

9. Do you think the changes made it easier for some to access your service?
 - a. If yes, who?
 - b. Why do you think this works for them?
 - c. What changes do you think you'll keep once the pandemic ends? Tell me why...

10. Since the beginning of the pandemic, what have you done that has been the most helpful for your patients?
 - a. For your team?

Meso/teams:

11. When you talk about your team, who do you consider as being part of this?
 - a. If not the full organization, ask about the structure of their larger organization.

12. Over the course of the pandemic, how has your work within your primary care team changed?

- a. How did your primary team work together in adapting to the pandemic?
- b. Is your role better or less understood by your team than before?
- c. How has communication between the primary care team been different over the course of the pandemic?
- d. Do you feel you were adequately involved in team discussions and decisions relating to the pandemic? How?
- e. How else has your relationship with your primary care team changed?
- f. Are there things that you wish could be done differently in how your team works together in the coming months?

13. If redeployed:

In your diary entries, you mentioned being redeployed. Tell me about that experience.

- a. How was the decision to redeploy you made?
 - i. Where did communications regarding redeployment come from?
- b. What were your main responsibilities when you were redeployed?
- c. How did you feel about being redeployed?
- d. How did redeployment impact your role within your primary care team?
- e. What happened with your caseload when you were redeployed?
- f. Did redeployment impact the dynamic of your primary care team? How?
- g. Did your primary care team keep in touch with you while you were redeployed? How?
 - i. If relevant: How about the larger organization you work within?
- h. Were there others within your team that were redeployed? Who?
- i. How was your transition back into your primary care team after redeployment?
- j. Do you expect to be redeployed in the future?

14. If no mention of redeployment in diaries or interview up to now:

Some of the other study participants mentioned being redeployed in their diaries, but you did not. To date, have you been redeployed?

- a. Was there ever a possibility you could have been redeployed? Is there still?
 - i. If yes, who presented it to you as an option?
 - ii. Who makes the decision?
- b. Were other members in your primary care team were redeployed? Who?
 - i. If yes, did their redeployment affect you? How?

15. Do you feel supported by your primary care organization during the pandemic?

- a. What are some things your organization (specify: MyHT, FHT, CHC) did to help you adapt to the changes brought about due to the pandemic?
- b. What is lacking? Where else do you need more support?
- c. What types of things could fill in those current gaps?
- d. Were your ideas and feedback sought by the primary care clinic leadership? Ie, is communication going both ways?

16. What do you think are the big challenges/ healthcare needs in your community right now?

Macro:

[de-emphasize if low on time, other than the provincial question]

We've talked a lot about how you and your primary care team and organization has adapted, as well as how access has changed.

Before closing, we want to shift focus to the broader regional and provincial context.

17. Think about your profession's regulatory body.

- a. What things have they done that have been most helpful in response to the pandemic?
- b. What supports do you think would help, moving forward, from your regulatory body?

- i. Why do you think those are important, or needed?
- ii. What would these supports help you achieve?

18. Consider your regional health organization – might be a regional health authority, or a local health integration network.

- a. What things have they done that have been most helpful in response to the pandemic?
- b. What supports do you think would help, moving forward, from your regulatory body?
 - i. Why do you think those are important, or needed?
 - ii. What would these supports help you achieve?

19. Think about your provincial government.

- a. What things have they done that have been most helpful in response to the pandemic?
- b. What supports do you think would help, moving forward, from your provincial government?
 - i. Why do you think those are important, or needed?
 - ii. What would these supports help you achieve?

20. To your knowledge, did any of these three external bodies assist your primary care clinic to adapt to the new changes COVID-19 brought? If so, how?

21. In your opinion, how well has your profession been integrated into the health system response to COVID19?

Closing:

22. Is there anything else you would like to add, that we have not asked about?

Appendix E

Table 4 Coding framework

RAM Mode	Theme	Definition
Interdependence	Primary care team	Information about the relationship between the provider and their primary care team.
	Clinic management	Information about the relationship between the provider and their clinic's management. Includes information about the supports and resources provided.
	Provincial authorities	Information about the supports, resources and guidance provided by governing authorities.
Group Identity	Group identity	Information about the provider's professional identity.
Role Function	Primary role	Activities done before the pandemic.
	Instrumental behaviour	New activities done during the pandemic that contribute to the pandemic response.
	Adapted role	Activities done before the pandemic but adapted during the pandemic.
Physiological	Senses	Emotional responses to working during pandemic.
	Protection	The methods used to physiologically protect the provider
	Activity and rest	Information on the physical and mental health of the provider during the pandemic.